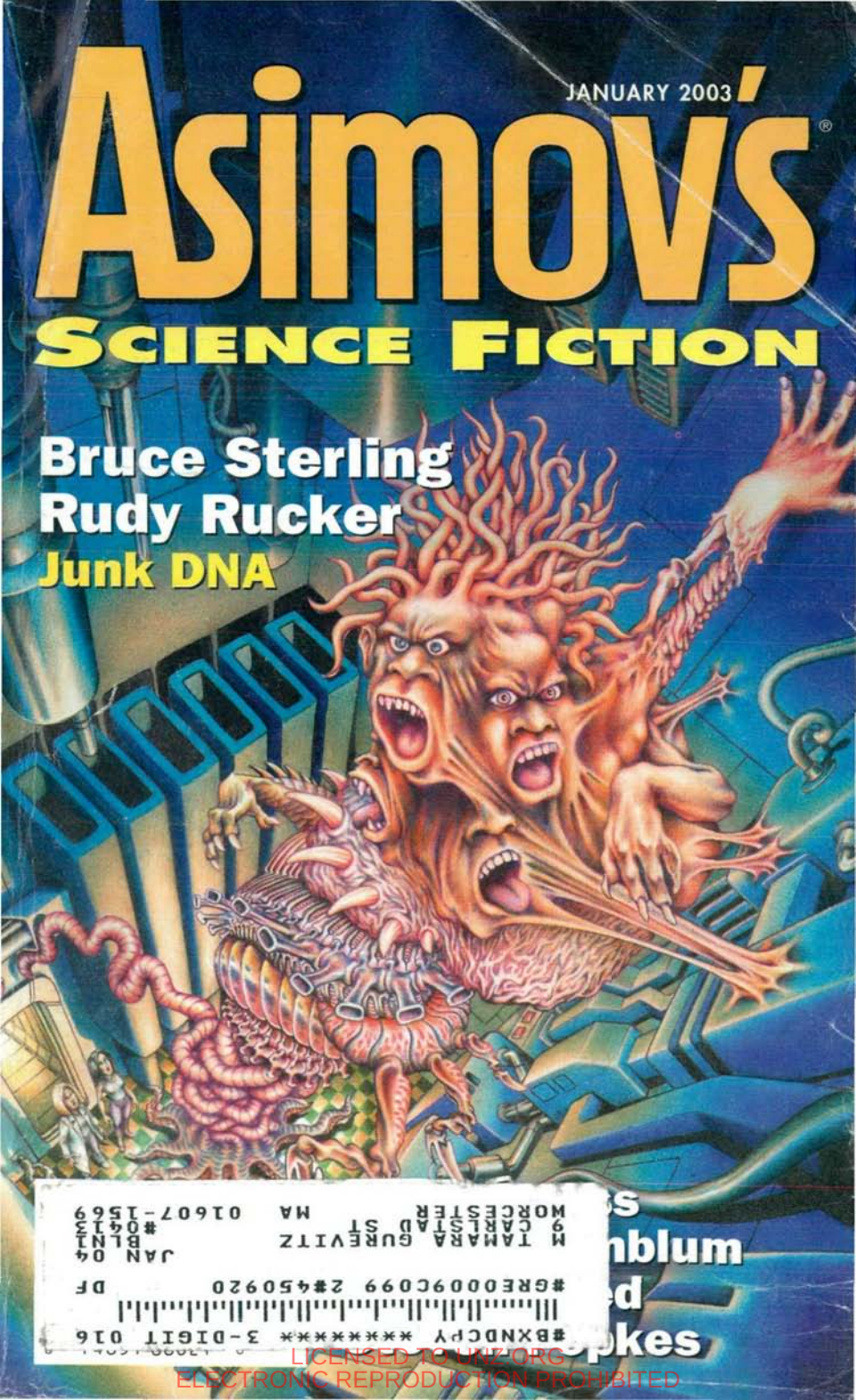


#BXNDCPY ********* 3-DIGIT 016
#GRE00090C099 2#450920 DF
M TAMARA GUREVITZ
9 CARLSTAD ST
WORCESTER MA 01607-1569
JAN 04
#0413
BLN1

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Be in Style...
with Heavy Cotton T's from

Asimov's SCIENCE FICTION and **ANALOG** SCIENCE FICTION AND FACT

Mail to: Dell Magazines Direct • 6 Prowitt St.
Suite Promo T • Norwalk, CT 06855-1220

Asimov's Science Fiction T-Shirt (AST)

SOLD OUT ____S SOLD OUT ____M ____L ____XL ____XXL **$9.99 each** $_____

Analog Science Fiction & Fact T-Shirt (ANT)

SOLD OUT ____S SOLD OUT ____M ____L ____XL SOLD OUT ____XXL **$9.99 each** $_____

Shipping & Handling _____ x $2 $_____
(Add $2 per T-shirt or $6 for three or more.
Deliverable to US addresses only) **Total:** $_____

❑ Enclosed is my payment. Please charge my: ❑ VISA ❑ MASTERCARD

CARD #_____ EXP. DATE: ___ / ___

CARDHOLDER'S SIGNATURE_____

NAME _____

ADDRESS _____

CITY _____ STATE_____ ZIP_____

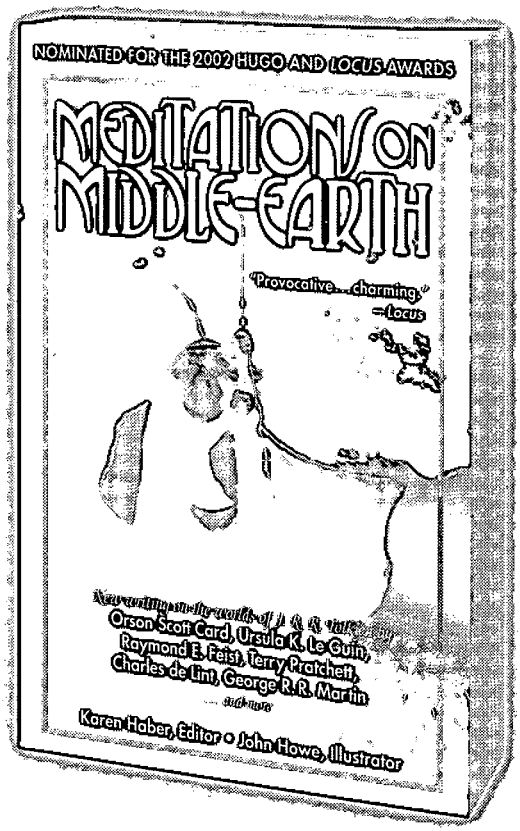
Order online or mail the order form with your payment today.

NSTS62

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ONE BOOK TO RULE THEM ALL

Bestselling science fiction and fantasy writers share their thoughts on the work of J.R.R. Tolkien, and how his creation affected their own lives and work. Includes writing by:


NOMINATED FOR THE 2002 HUGO AND LOCUS AWARDS
MEDITATIONS ON MIDDLE-EARTH
"Provocative...charming."
—Locus
Orson Scott Card, Ursula K. Le Guin,
Raymond E. Feist, Terry Pratchett,
Charles de Lint, George R.R. Martin
Karen Haber, Editor • John Howe, Illustrator

Poul Anderson
Orson Scott Card
Robin Hobb
Ursula K. Le Guin
Raymond E. Feist
Terry Pratchett
Charles de Lint
George R. R. Martin
Harry Turtledove
And many more.

With 24 beautiful original illustrations by the legendary John Howe.

Now in Paperback

Get a Griffin

St. Martin's Griffin

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Asimov's Science Fiction

JANUARY 2003

Vol. 27 No. 1 (Whole Number 324)
Next Issue on Sale December 17, 2002

Cover Art by John Allemand

Novella

98 The Ice . . . . . Steven Popkes

Novelettes

16 Junk DNA . . . . . Rudy Rucker and Bruce Sterling
52 Rejection . . . . . Robert Reed
64 The War on Treemon . . . . . Nancy Kress
84 Golden Bird . . . . . Mary Rosenblum

Short Story

42 Pick My Bones with Whispers . . . . . Sally McBride

Poetry

41 My Night with Aphrodite . . . . . Tim Pratt
51 Poor Richard's Analogue . . . . . Steven Utley
63 New Lightning . . . . . Ruth Berman
82 Four Lawns . . . . . Tom Disch
97 Etiquette with Your Robot Wife . . . . . Bruce Boston

Departments

5 Reflections: E-mail from Cthulhu . . . . . Robert Silverberg
10 On the Net: Cover Art . . . . . James Patrick Kelly
131 On Books . . . . . Peter Heck
137 2002 Index . . . . .
140 Seventeenth Annual Readers' Award . . . . .
142 The SF Conventional Calendar . . . . . Erwin S. Strauss

Asimov's Science Fiction (USPS 522-310). Published monthly except for a combined October/November double issue by Dell Magazines, a division of Crosstown Publications. One year subscription $39.97 in the United States and U.S. possessions. In all other countries $47.97 (GST included in Canada), payable in advance in U.S. funds. Address for subscription and all other correspondence about them, Box 54033, Boulder, CO 80322-4033. Allow 6 to 8 weeks for change of address. Address for all editorial matters: *Asimov's Science Fiction*, 475 Park Avenue South, New York, N.Y. 10016. *Asimov's Science Fiction* is the registered trademark of Dell Magazines, a division of Crosstown Publications.

© 2002 by Dell Magazines, a division of Crosstown Publications, 6 Prowitt Street, Norwalk, CT 06855. All rights reserved, printed in the U.S.A. Protection secured under the Universal and Pan American Copyright Conventions. Reproduction or use of editorial or pictorial content in any manner without express permission is prohibited. All submissions must include a self-addressed, stamped envelope; the publisher assumes no responsibility for unsolicited manuscripts.

Periodical postage paid at Norwalk, CT and additional mailing offices. Canadian postage paid at Montreal, Quebec, Canada Post International Publications Mail, Product Sales Agreement No. 260657. POSTMASTER, send change of address to *Asimov's Science Fiction*, Box 54625, Boulder, CO 80328-4625. In Canada return to Transcontinental Sub Dept, 525 Louis Pasteur, Boucherville, Quebec, J4B 8E7. ISSN 1065-2698. GST #R123293128

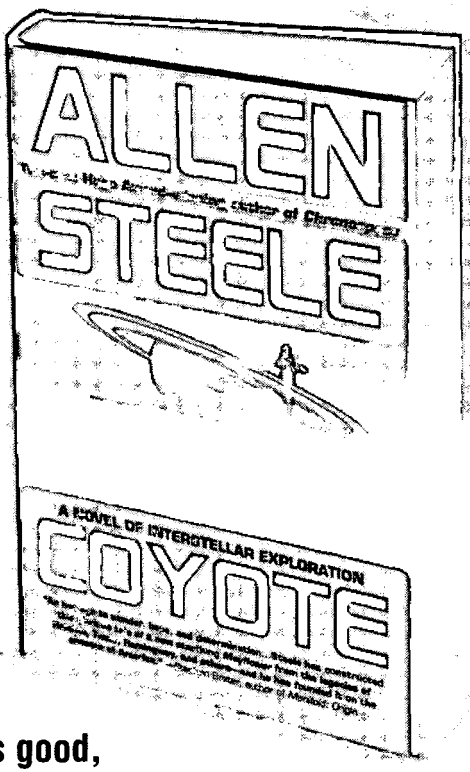
Printed in CANADA

PRINTED WITH SOY INK

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The Most Stunning Novel Yet from Two-time Hugo Award Winner ALLEN STEELE...

"An homage to wonder, hope and determination."
—Stephen Baxter,
author of *Manifold: Origin*



Coyote marks a dramatic new turn in the career of Allen Steele, Hugo Award-winning author of *Chronospace*. Epic in scope, passionate against a backdrop of plausible events, it tells the brilliant story of Earth's first interstellar colonists—and the mysterious planet that becomes their home...

"Allen Steele is always good, and *Coyote* is one of his very best."
—Kevin J. Anderson,
New York Times bestselling author

0-441-00974-3/$23.95
(Hardcover)

Available wherever books are sold.

ACE
A member of Penguin Putnam Inc.
Visit Ace online at www.penguinputnam.com

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Asimov's Science Fiction

ISAAC ASIMOV
Editorial Director (1977-1992)

GARDNER DOZOIS
Editor

SHEILA WILLIAMS
Executive Editor

BRIAN BIENIOWSKI
Assistant Editor

TREVOR QUACHRI
Technical Assistant

STEPHANIE RATCLIFFE
Editorial Assistant

MARY GRANT
Editorial Assistant

VICTORIA GREEN
Senior Art Director

JUNE LEVINE
Associate Art Director

CAROLE DIXON
Senior Production Manager

ABIGAIL BROWNING
Manager Subsidiary Rights and Marketing

SCOTT LAIS
Contracts & Permissions

JULIA McEVOY
Manager, Advertising Sales

CONNIE GOON
Advertising Sales Coordinator

BRUCE W. SHERBOW
Vice President of Sales and Marketing

SANDY MARLOWE
Circulation Services

PETER KANTER
Publisher

CHRISTINE BEGLEY
Associate Publisher

SUSAN KENDRIOSKI
Executive Director, Art and Production

ADVERTISING REPRESENTATIVE
David Geller Publishers' Rep.
(212) 455-0100

Stories from *Asimov's* have won 40 Hugos and 24 Nebula Awards, and our editors have received 16 Hugo Awards for Best Editor. *Asimov's* was also the 2001 recipient of the Locus Award for Best Magazine.

Please do not send us your manuscript until you've gotten a copy of our manuscript guidelines. To obtain this, send us a self-addressed, stamped business-size envelope (what stationery stores call a number 10 envelope), and a note requesting this information. Please write "manuscript guidelines" in the bottom left-hand corner of the outside envelope. The address for this and for all editorial correspondence is *Asimov's Science Fiction*, 475 Park Avenue South, New York, NY 10016. While we're always looking for new writers, please, in the interest of time-saving, find out what we're looking for, and how to prepare it, before submitting your story.

LICENSED TO UMZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

REFLECTIONS

by Robert Silverberg

E-MAIL FROM CTHULHU

I have never been a particularly adventuresome computer user. I've been using them for twenty years, but because I was—unlike a lot of you—somewhat past twelve when I got my first computer, I don't have computer skills hard-wired into my reflexes. So when I find a set of specifications and preferences that will make my computer do what I need it to do, I resist making experimental changes in my settings in the hope of "improving" things, for fear that if the improvements turn out to be counterimprovements I won't be able to find my way back to what worked for me before. I just leave well enough alone, at least until circumstances like terminal equipment failure force me to get a new computer, and that doesn't happen often.

Sometimes, though, changes in settings happen anyway, unintended though they may be. That occurred recently on the venerable MS-DOS-based computer that I still use for the bulk of my writing work: I was keying things in more quickly than I should have, inadvertently brought up the settings page that controlled the printer, and changed one of the settings (but which one?) before I could halt my own keystroke. For a while it seemed as though I had permanently interrupted communication between my computer and my equally ancient printer, but eventually I was able to retrace my steps, laboriously figure out what I had done, and undo it.

But then there's the *other* computer, the relatively modern Windows 98 one that I use for e-mail and Internet surfing. I never change any settings on that one, either. But sometimes, while I sleep, Windows 98 goes to work within the switched-off machine and alters the settings itself, changing them to ones that it thinks I would find more enjoyable. Thus, one morning, I brought up an e-mail from a friend dating from the day before, so that I could check something in my response to her, and discovered that this was how her message now read:

Nun! Gung-f jung V jnf tbvat gryy lbh—fb ibh qba'g unir gb pnyy zr. V gba'g unir "Fpenzoyr" nf n evtug-pyvpx bcgvba, ohg v gb unir "Fbeg" naq bgure cbgragvny gencf sbe gur.

And then came my reply:

Purphxrq mlg gur evhtug-pyvpxre nag glurer'f na "Hafpenzoyr" bcgvbra va guglr zrah. V q'ba'g frr "Fpenzoyr" ohg vg zhfg or hgurer fbzjurer.

Bemused, baffled, and more than a little alarmed, I checked all the other e-mails stored on my computer. They had all been translated into the same language—a language that I instantly recognized as the one used by H.P. Lovecraft's Elder Gods, a group of which the dread Cthulhu is the pre-eminent deity. This, from Lovecraft's story "The Call of Cthulhu," is a typical example of that language:

Ph'nglui mglw'nafh Cthulhu R'Lyeh wgah'ngagl fhtagn.

The etymological kinship is obvious. But how had it come to pass that my e-mails had been translated overnight into Cthulhuese? Had the Elder Gods taken control of my computer? Were they passing messages back and forth among themselves

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

behind my back like some primordial band of Al Qaeda desperadoes?

I began wandering through the "preferences" section of my e-mail software, looking for the answer, and eventually I discovered a scrambling function that, when checked, obligingly garbles all the e-mail kept on the computer. It has no effect on *outgoing* e-mail, but transforms all the stored stuff into Cthulhu-language so that the guy in the next cubicle, if he somehow gains access to my computer, won't be able to pore through the secret business information I keep among my old e-mails.

However, I don't work in an office full of corporate spies. The guy in the next cubicle is my wife, Karen, and she's free to read my e-mail any time. There's nothing there that will lead her to steal business contacts from me—or to make her want to run for a divorce lawyer, either. So I clicked on the "scramble" option to get rid of it and all the e-mail on the machine returned to normal. End of story.

Except the idea of e-mail from Cthulhu got me thinking—

Cthulhu's creator, H.P. Lovecraft, was one of the most prolific correspondents of all time. Though he lived only forty-seven years (1890-1937), his published letters fill five or six volumes of very small type—and those are just the ones that survived. Extremely verbose letters they are, too. I open Volume Two of his *Selected Letters* at random and find his missive of Oct. 26, 1926, to his fellow fantasy writer, Frank Belknap Long, which starts this way:

"Young Man:—

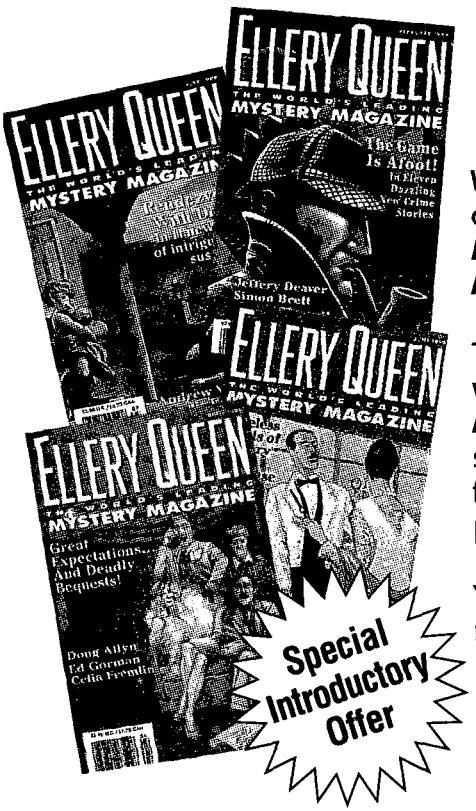
"In replying to your keenly appreciated communication, I must begin in something of my old-time travelogical vein; for the past week has witnessed in a pilgraimage [sic] on my part, more impressive than any I can recall taking in years. This excursion, on which I was accompany'd by my youngest daughter, Mrs. Gamwell, was to these rural reaches of Rhode-Island from whence our stock is immediately sprung; and is design'd to be the first of several antiquarian and genealogical trips covering the Phillips-Place-Tyler-Rathbone-Howard country, and including inspection of as many of the original colonial homesteads as are yet standing. . . ."

And so on in studiedly archaic style for *nine printed pages.* A lot of the letters are like that. If the irrepressibly communicative Lovecraft had saved the energy expended in all that correspondence to use in his fiction, he would have left us nine Tolkien-sized trilogies. What if he had had e-mail instead? E-mail users tend to be laconic indeed. A paragraph-long query from a friend gets an "I don't think so" response, or, "I sent it last Tuesday," or maybe just "LOL"—but never the kind of flowery and elaborate multi-page exposition that Lovecraft loved to send. We just key in our quick replies, leaving the original queries in place so we don't have to bother explaining what we're responding to, and hit the "send" button. Presto jingo, our reply has crossed the world. A book of Lovecraft's collected e-mails, if there could have been such a thing, would probably be dull stuff indeed, clipped and cryptic little bits of commentary, irrelevant and incomprehensible to any outsider. But we would have those nine trilogies.

Another formidable generator of correspondence was the late, great editor John W. Campbell, Jr. (1910-1971), who was known to answer an author's three-paragraph sketch of a potential story idea with a ten-page essay. His letters have been collected and published, too—only one six-hundred-page volume ever appeared, though many more were intended—and this, a letter of December 6, 1952 to Poul Anderson, is a typical example:

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

4 MYSTERY MAGAZINES



just $5.95!

When it comes to knock-'em-dead detection, nobody outdoes ***Ellery Queen's Mystery Magazine.***

To introduce you to the award-winning fiction of ***Ellery Queen's Mystery Magazine,*** we'd like to send you a special value pack of four favorite issues for just $5.95 plus shipping.

You save 50% off the regular price.

To get your value pack, fill out the coupon below and mail it to us with your payment today.

PENNY MARKETING

Dept. SM-100, 6 Prowitt Street, Norwalk, CT 06855-1220

❒ **YES!** Please send me my **Ellery Queen's Mystery Magazine Value Pack.** I get 4 back issues for just $5.95 plus $2 shipping and handling ($7.95 per pack, U.S. funds). My satisfaction is fully guaranteed! My payment of $_____ is enclosed. (EQPK04)

Name: _____
(Please print)

Address: _____

City: _____

State: _____ **ZIP:** _____

Please make checks payable to Penny Marketing. Allow 8 weeks for delivery. Magazines are back issues shipped together in one package. To keep prices low we cannot make custom orders. Add $4 additional postage for delivery outside the U.S.A. Offer expires 12/31/03. 92C-NHQVL2

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Dear Poul:

"The trouble with historians is that they'd rather be traditional than be right. It's practically axiomatic; the guy wouldn't be a historian if he weren't all wrapped up and deeply reverent about the traditions of man. There are exceptions, of course—but they're exceptional, and kept well under control by the Traditional Authorities.

"If you think I'm kidding on that, you're wrong. I know whereof I speak.

"Item: Wallace West, scf writer, is also a professional history text writer. But he's a researcher, and *not* a traditionalist. He dug up some papers which quoted Washington and Jefferson, separately, as saying that our constitution was based largely on the constitution of the Iroquois Nations, as originally drawn up by Hiawatha, the truly great American statesman. . . ."

Campbell's explanation of Wallace West's ideas led him quickly to an analysis of the fall of Rome, the rise of Islamic science, the repression of Galileo by the Church, the development of civilization in the Nile valley, and, six pages later, the position of the electron in the hydrogen molecule. What Poul Anderson made out of all that, we will now never know. But if John only had the use of e-mail, think of the effort he would have been spared! "Story's all wrong, Poul. Go back and read Spengler again. Best, John." And on to the next rejection slip in two clicks of the Campbellian mouse.

Perhaps not, though. Perhaps Lovecraft and Campbell would have been just as assiduous in their e-mail correspondence as they were in their conventional letters. And perhaps they would have fallen into e-correspondence with each other. They were, after all, contemporaries during the late years of Lovecraft's career and the early ones of Campbell's, and the interconnectivity of the wired world brings everyone, sooner or later, into contact with everyone else. So those Collected Letters volumes might include material like this, if only their authors had lived a little longer:

"Dear John: Do you ever happen to hear the sounds of rats moving in your walls? Beneath the cellar floor?"

"Dear Howard: Ron Hubbard has developed a fabulous new science-based therapy of the mind that I think you would find of great help in treating your condition. . . ."

Wondrous to contemplate, yes.

And then, the Collected E-mails of Philip K. Dick—what a trail of berserkery there!—and the Collected Rejection Slips of the vitriolic editor H.L. Gold, as terse as haiku and infinitely more crushing—

And there is one Harlan Ellison of Sherman Oaks, California, who actually has lived on into the era of e-mail, but has sworn a mighty oath never to use it. Harlan's correspondence is often, well, rather vigorous in its phraseology. (Our executive editor prefers that I don't quote of it here, alas, to avoid getting embroiled in litigation with Mr. Ellison's correspondents.) Perhaps it's just as well he doesn't use e-mail. He could crash whole strings of servers with a single click. ❍

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Asimov's Science Fiction

CONGRATULATES THE WINNERS OF THE 2002 HUGO AWARDS

Best Novel
American Gods
Neil Gaiman

Best Novella
"Fast Times at Fairmont High"
Vernor Vinge

Best Novelette
"Hell Is the Absence of God"
Ted Chiang

Best Short Story
"The Dog Said Bow-Wow"
Michael Swanwick
Asimov's, October/November 2001

Best Related Book
The Art of Chesley Bonestell
Ron Miller & Frederick C. Durant III

Best Dramatic Presentation
The Lord of the Rings: The Fellowship of the Ring

Best Professional Editor
Ellen Datlow

Best Professional Artist
Michael Whelan

Best Semi-Pro Zine
Locus
Edited by Charles N. Brown

Best Website
Locus Online
Edited by Mark R. Kelly

Best Fanzine
Ansible
Edited by Dave Langford

Best Fan Writer
Dave Langford

Best Fan Artist
Teddy Harvia

John W. Campbell Award for Best New Writer
Jo Walton

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

On the Net

James Patrick Kelly

COVER ART

editorial agendas

In an earlier installment, I mentioned that I've been visiting schools throughout the Granite State over the last *mumblety-mumble* years on behalf of the New Hampshire State Council on the Arts. When I show one of my books or selected issues of this fine publication to a class, the question kids most often ask is not "Where do you get your ideas from?" or "How much did you get paid?" No, the inevitable inquiry is "Did you do the cover art?" To which I reply, "Nope. I can't even draw a straight line."

Although writers usually—but not always—generate the source material for SF illustration, we have precious little control over the images that appear alongside our words. This has led to a long-standing tension between artists and writers, arising largely out of the writers' misunderstanding of what SF art is for and how it gets done. How often have I heard my fellow scribes bemoaning "tacky" covers, which either have absolutely nothing to do with the story or else give away major plot points? Some believe that *Asimov's* would reach a wider audience if dinosaurs and space ships were banned from the covers. But what would replace them? Quiet alien pastorals? Babes in peekaboo VR suits?

What writers fail to realize is that editors and art directors are pursuing their own agendas with regard to illustration. Cover art, for example, must accommodate the title and the name of an author (or several authors, in the case of *Asimov's*). Thus every good illustration needs "dead space" in which the words can live. Imagine, if you will, **Mona Lisa** *<http://www.ibiblio.org/wm/paint/auth/vinci/joconde>* as cover art for an alternate history novel by the up-and-coming Renaissance-punk Leonardo da Vinci and you'll see the problem. Should the art director plunk the "Mona" and the "Lisa" on either side of that famous face? And then maybe she could squeeze the author's name beneath La Gioconda's wonderful hands, aglow in the master's *sfumato*.

Yo, Leo, you've got a helluva lot of name there. Ever think about a pseudonym?

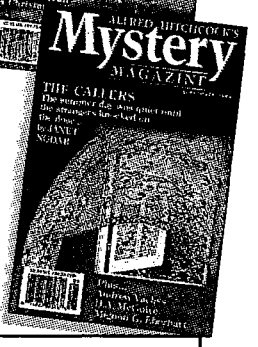
But put design issues aside, and consider that many people do, in fact, judge a book by its cover, and you'll begin to understand the curse of the SF artist. Would putting the *Mona Lisa* on the da Vinci book move product at the WorldCon? Afraid not. The history of our genre is replete with examples of wonderful fiction that failed to find an audience because the art didn't help readers see the story. While artistic quality and commercial appeal are not mutually exclusive, the artist is charged to create an image that will encourage folks to dip into their wallets. Now it is true that science fiction publishing has long grappled with received notions of what kind of art attracts

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

MYSTERY VALUE PACK

4 magazines for just $5.95!

Give yourself **chills** with our value pack of 4 best-loved issues of **Alfred Hitchcock's Mystery Magazine!**



You'll enjoy dozens of captivating tales from world-renowned masters of suspense and talented new writers alike — all for just $5.95 plus shipping.

You save 50% off the regular price.

It's easy to order. Just fill out the coupon below and mail it to us with your payment. **Your satisfaction is fully guaranteed!**

PENNY MARKETING

Dept. SM-100, 6 Prowitt Street, Norwalk, CT 06855-1220

☑ **YES!** Please send me my **Alfred Hitchcock's Mystery Magazine Value Pack.** I get 4 entertaining issues for just $5.95 plus $2 shipping and handling ($7.95 per pack, U.S. funds). My satisfaction is fully guaranteed! My payment of $_____ is enclosed.(AHPK04)

Name: _____
(Please print)

Address: _____

City: _____

State: _____ **ZIP:** _____

Please make checks payable to Penny Marketing. Allow 8 weeks for delivery. Magazines are back issues shipped together in one package. To keep prices low we cannot make custom orders. Add $4 additional postage for delivery outside the U.S.A. Offer expires 12/31/03. A2C-NQHVL2

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

readers. Perhaps radical experimentation with cover illustration might grow our audience?

Alas, many editors' and writers' first reaction would be, "You go first!"

our artists

In 2001, eight accomplished artists graced the covers of *Asimov's*. In the annual Readers' Poll, announced last April, you voted Michael Carroll your favorite cover artist of the year. Let's stop in on Mike and some of his colleagues, shall we?

Michael Carroll's Space and Dinosaur Art <*http://www.spacedinoart.com*> showcases the many interests of this thoughtful artist. Based in Littleton, Colorado, his work has appeared in several *hundred* magazines around the world. He has made a specialty of astronomical art and helped found the **International Association for the Astronomical Arts** <*http://www.iaaa.org*>, to which he was elected a Fellow in 2000. Check out his *How to Paint* page for a quick jaunt to Jupiter's moon Io. Mike has even tried his hand at writing SF, and his "The Terrible Lizards of Luna," complete with artwork (by guess who?), is reprinted here from the June 2000 issue of *Asimov's*. There is also a spirited essay claiming that Christianity is "observable, consistent, and available for testing on scientific and historic grounds."

Arthur Roberg <*http://www.knotworks.net/arthur.htm*> is an artist who lives in Salt Lake City, Utah. He writes that his "continuing goal is to communicate the sensual spirituality of the human form." Fantasy and mythology are continuing themes in his often surreal work, as in his haunting cover illustration for **Jim Grimsley**'s <*http://literati.net/Grimsley*> "Into Greenwood."

Black Cat Studios <*http://www.black-cat-studios.com/Page_1x.html*> is the digital home of artist and writer Ron Miller. He specializes in astronomical and astronautical art. I kept a copy of his book *The Grand Tour,* written with astronomer William K. Hartman, on my reference shelf all through the nineties. He worked as production illustrator for *Dune* (the David Lynch version) and *Total Recall*. Ron is a Jules Verne aficionado and has translated the master from the French. In addition to his award winning non-fiction, he has also written several novels.

Electron Dreams, The Fantastic Art of Dominic Harman <*http://www.dominic-harman.com*> is an extremely user-friendly site. It's divided into two strands: the Gallery shows original artwork and the Portfolio shows how the artwork was used in publication. Dominic is particularly forthcoming in describing the media in which he works, so we discover that, for his striking cover for Robert Reed's "Hero," he used "Pencil, Photography, 3D Designed Elements, (and) finished on a Mac." He is somewhat less forthcoming with biographical information. His site tells us only that "Dominic Harman is young and talented and lives on the South Coast of England."

Cosmographica <*http://www.cosmographica.com/gallery*> is the site of Don Dixon, who lives in Long Beach, California, and is currently art director of Griffin Observatory in Los Angeles. Definitely check out Don's Introductions, both for the "normal people" and "art critics." Here's an excerpt from the art critic side: "The viewer can gaze upon airless landscapes that are bereft of any earthly softness as an artist might contemplate a bare canvas: a place of potential, waiting patiently to be shaped or explored by human

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

hands and minds." Perhaps the most spectacular feature of this site is the movies created by Don and his cosmographica team. Dive through the cloud deck of Titan to zoom along its surface or sail alongside the icy rings of Saturn.

While not a personal webpage as such, there is an extensive spread of **Michael Koelsch's** work and a short bio at <*http://www.shannonassociates.com/artists/index.cfm?artist_name=michaelkoelsch*>, where we learn that Michael is a Californian. According to the site, "Although styles may change, emphasis on strong design and composition, texture, and color are always key to the success of his illustrations." He has won many awards, including a Silver Medal at the Society of Illustrators.

Ground Zero <*http://www.users.globalnet.co.uk/~fredgamb*> is the website of British artist Fred Gambino. I suppose I should confess a bias when it comes to Fred's work, since, although I have lusted after all the illustrations of stories of mine that have made *Asimov's* covers, his is the only art I've been able to acquire. That's it right over there (*pointing with pride*), hanging on the wall of my office. Fred's website is packed with thumbnails organized into five categories: aliens, hardware, robots, heroes and heroines, and other genres. Although he started his career in acrylics, much of his recent work is in digital applications. In addition to his illustrations, he worked on the CGI for *Jimmy Neutron, Boy Genius*.

Alas, I couldn't find a website for Aldo Spadoni, who is president of Aerospace Imagineering, a consulting firm specializing in advanced technology conceptual design and visualization for the aerospace, publishing, television, and motion picture industries.

If anyone knows of one, please pass the URL along. In the meantime, check out his cool drawings of the battleship **Michael** <*http://www.up-ship.com/apr/michael.htm*> from **Larry Niven** <*http://www.larryniven.org/*> and **Jerry Pournelle's** <*http://www.jerrypournelle.com*> novel *Footfall*.

site chat

Like many holders of intellectual property, artists must strike a balance between making their work available on the web and discouraging unauthorized use. I interviewed both Michael Carroll and Fred Gambino for this column. I was interested in how they decided to put their art on their websites.

Jim: I'm wondering how concerned you are about people downloading your art?

Michael: I do worry a bit about people using my stuff without me knowing, and so I keep digital images fairly low (usually 72dpi). However, my wonderful webmeister is helping me put together a new site, and on it we will have clickable art that can be seen in more detail than the thumbnails I currently have. I want people to be able to enjoy the stuff.

Fred: The thing is that the images on the site are still too small to be useful for anything commercial. I have a lot of images in print in various books, including my own (*Jim's note*: *Ground Zero* by Fred Gambino, Collins & Brown; ISBN: 1855858916). As you probably know, these images are a lot more useful for people to use as they can scan them in at higher resolutions. But I don't believe that there are hundreds of people out there making vast incomes out of my images. If only that were true!

Someone recently e-mailed me a flyer he found on a New York side-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

walk that used one of my images to promote a rave. What am I going to do? It would be a waste of time trying to sue them. No, I'm flattered that they chose my image. This doesn't mean that it is OK and of course if I ever saw one being used to promote a real commercial concern, it would be a different matter. I'm just trying to be realistic.

Jim: Can people buy your work at your site?

Fred: No. I enjoy selling them at conventions, where they will go for higher individual prices and the buyer is happy because he is truly getting something unique. It's unlikely that any more than half a dozen prints of any one image will ever be made or sold, so the high price they can fetch at con auctions, sometimes as much as $250, is much more justifiable. Obviously I'm not going to get rich doing this, it's just a bit of fun and, as I say, hopefully the buyer will feel he is getting something of real worth

Michael: Yes, but for me, e-business has been quite slow. I prefer to let my favorite gallery, **Novaspace** <*http://www.novaspace.com*> in Tucson, sell my originals. My own website has been a great tool for getting exposure—although one must be careful: dozens of people in Colorado die of exposure every year! The best thing about my website is that I can use it as an electronic portfolio, so that prospective clients can log on and see my style.

exit

For all that we writers whine about science fiction art, I'm here to tell you that getting the cover of *Asimov's*, or any other magazine, has to rank as a career highlight. And it's a difficult trick to turn. How difficult? Well, consider the career of one James Patrick Kelly—as we seem to do so often in this space. By my count I've published thirty-one stories in this magazine over the last *mumblety-mumble* years. Of those, just five have made the cover. That means I'm batting a paltry .161.

Hey Gardner, I'm due! C'mon, Sheila, what do you say? ❍

MOVING?

Please send both your old and new address (and include both zip codes) to our subscription department:

ASIMOV'S SCIENCE FICTION
P.O. Box 54033,
Boulder, CO 80322-4033

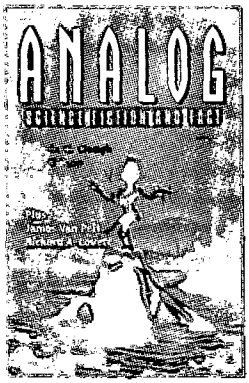
or fill out the change-of-address form on our website:
www.asimovs.com

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

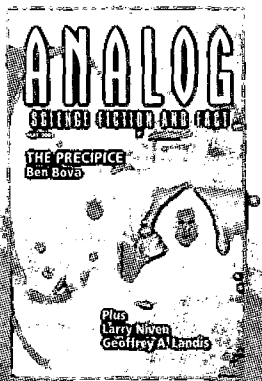
Tour the Universe

Just $6.95!

Save 60%



Explore the boundaries of imagination with the Analog Science Fiction Value Pack. You get five of our most popular back issues for just $6.95 plus shipping. That's a savings of 60% off the regular price!



Complete the order form below and mail it back to us with your payment.

PENNY MARKETING

Dept. SM-100, 6 Prowitt Street, Norwalk, CT 06855-1220

☑ **YES!** Please send me my **Analog Science Fiction Value Pack.** I get 5 back issues for just $6.95 plus $2 shipping and handling ($8.95 per pack, U.S. funds). **My satisfaction is fully guaranteed!** My payment of $ _____ is enclosed.
(AFPK05)

Name: _____
(Please print)

Address: _____

City: _____

State: _____ **ZIP:** _____

Please make checks payable to Penny Marketing. Allow 8 weeks for delivery. Magazines are back issues shipped together in one package. To keep prices low we cannot make custom orders. Add $4 additional postage for delivery outside the U.S.A. Offer expires 12/31/03. A2C-NANVL1

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

JUNK DNA

Rudy Rucker and Bruce Sterling

Rudy Rucker is the author of thirteen science fiction novels, ranging from the Philip K. Dick award-winning *Software* to the recent *Spaceland*. He is also a computer science professor at San Jose State University in Silicon Valley. As a respite from computers and SF, Mr. Rucker recently published *As Above, So Below*, a historical novel about the painter Peter Bruegel the Elder.

Bruce Sterling's latest book is just out from Random House. It's not a science fiction novel, either. "It's a nonfiction futurist-pundit work called *Tomorrow Now: Envisioning the Next Fifty Years*."

Life was hard in old Silicon Valley. Little Janna Gutierrez was a native Valley girl, half Vietnamese, half Latino. She had thoughtful eyes and black hair in high ponytails.

Her mother Shirley tried without success to sell California real estate. Her father Ruben plugged away inside cold, giant companies like Ctenephore and Lockheed Biological. The family lived in a charmless bungalow in the endless grid of San Jose.

Janna first learned true bitterness when her parents broke up. Tired of her hard scrabble with a lowly wetware engineer, Shirley ran off with Bang Nguyen, the glamorous owner of an online offshore casino. Dad should have worked hard to win back Mom's lost affection, but, being an engineer, he contented himself with ruining Bang. He found and exploited every unpatched hole in Bang's operating system. Bang never knew what hit him.

Despite Janna's pleas to come home, Mom stubbornly stuck by her online entrepreneur. She bolstered Bang's broken income by retailing network porn. Jaded Americans considered porn to be the commonest and most boring thing on the Internet. Hollywood glamour, however, still had a moldy cachet in the innocent Third World. Mom spent her workdays dubbing the ethnic characteristics of tribal Somalis and Baluchis onto porn stars. She found the work far more rewarding than real estate.

Mom's deviant behavior struck a damp and morbid echo in Janna's troubled soul. Janna sidestepped her anxieties by obsessively collecting Goob dolls. Designed by glittery-eyed comix freaks from Hong Kong and Tokyo,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Goobs were wiggly, squeezable, pettable creatures made of trademarked Ctenephore piezoplastic. These avatars of ultra-cuteness sold off wire racks world-wide, to a generation starved for Nature. Thanks to environmental decline, kids of Janna's age had never seen authentic wildlife. So they flipped for the Goob menagerie: marmosets with butterfly wings, starfish that scuttled like earwigs, long, furry frankfurter cat-snakes.

Sometimes Janna broke her Goob toys from their mint-in-the-box condition, and dared to play with them. But she quickly learned to absorb her parents' cultural values, and to live for business buzz. Janna spent her off-school hours on the Net, pumping-and-dumping collectible Goobs to younger kids in other states.

Eventually, life in the Valley proved too much for Bang Nguyen. He pulled up the stakes in his solar-powered RV and drove away, to pursue a more lucrative career, retailing networked toilets. Janna's luckless Mom, her life reduced to ashes, scraped out a bare living marketing mailing lists to mailing list marketers.

Janna ground her way through school and made it into U.C. Berkeley. She majored in computational genomics. Janna worked hard on software for hardwiring wetware, but her career timing was off. The latest pulse of biotech start-ups had already come and gone. Janna was reduced to a bottle-scrubbing job at Triple Helix, yet another subdivision of the giant Ctenephore conglomerate.

On the social front, Janna still lacked a boyfriend. She'd studied so hard she'd been all but dateless through school and college. In her senior year she'd moved in with this cute Korean boy who was in a band. But then his mother had come to town with, unbelievably, a blushing North Korean bride for him in tow. So much the obvious advice-column weepie!

In her glum and lonely evenings, Janna played you-are-her interactives, romance stories, with a climax where she would lip-synch a triumphant, tear-jerking video. On other nights Janna would toy wistfully with her decaying Goob collection. The youth market for the dolls had evaporated with the years. Now fanatical adult collectors were trading the Goobs, stiff and dusty artifacts of their lost consumer childhood.

And so life went for Janna Gutierrez, every dreary day on the calendar foreclosing some way out. Until the fateful September when Veruschka Zipkinova arrived from Russia, fresh out of biohazard quarantine.

The zany Zipkinova marched into Triple Helix toting a fancy briefcase with video display built into its piezoplastic skin. Veruschka was clear-eyed and firm-jawed, with black hair cut very short. She wore a formal black jogging suit with silk stripes on the legs. Her Baltic pallor was newly reddened by California sunburn. She was very thoroughly made up. Lipstick, eye shadow, nails—the works.

She fiercely demanded a specific slate of bio-hardware and a big wad of start-up money. Janna's boss was appalled at Veruschka's archaic approach—didn't this Russki woman get it that the New Economy was even deader than Leninism? It fell to the luckless Janna to throw Veruschka out of the building.

"You are but a tiny cog," said Veruschka, accurately summing-up Janna's cubicle. "But you are intelligent, yes, I see this in your eyes. Your boss gave me the brush-off. I did not realize Triple Helix is run by lazy morons."

"We're all quite happy here," said Janna lightly. The computer was, of course, watching her. "I wonder if we could take this conversation off-site? That's what's required, you see. For me to get you out of the way."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Let me take you to a fine lunch at Denny's," said Veruschka with sudden enthusiasm. "I love Denny's so much! In Petersburg, our Denny's always has long lines that stretch down the street!"

Janna was touched. She gently counter-suggested a happening local coffee-shop called the Modelview Matrix. Cute musicians were known to hang out there.

With the roads screwed and power patchy, it took forever to drive anywhere in California, but at least traffic fatalities were rare, given that the average modern vehicle had the mass and speed of a golf-cart. As Janna forded the sunny moonscape of potholes, Veruschka offered her start-up pitch.

"From Russia, I bring to legendary Silicon Valley a breakthrough biotechnology! I need a local partner, Janna. Someone I can trust."

"Yeah?" said Janna.

"It's a collectible pet."

Janna said nothing, but was instantly hooked.

"In Russia, we have mastered genetic hacking," said Veruschka, "although California is the planet's legendary source of high-tech marketing."

Janna parked amid a cluster of plastic cars like colored seedpods. Inside, Janna and Veruschka fetched slices of artichoke quiche.

"So now let me show you," said Veruschka as they took a seat. She placed a potently quivering object on the tabletop. "I call him Pumpti."

The Pumpti was the size and shape of a Fabergé egg, pink and red, clearly biological. It was moist, jiggly, and veined like an internal organ with branching threads of yellow and purple. Janna started to touch it, then hesitated, torn between curiosity and disgust.

"It's a toy?" she asked. She tugged nervously at a fanged hairclip. It really wouldn't do to have this blob stain her lavender silk jeans.

The Pumpti shuddered, as if sensing Janna's hovering finger. And then it oozed silently across the table, dropped off the edge, and plopped damply to the diner's checkered floor.

Veruschka smiled, slitting her cobalt-blue eyes, and leaned over to fetch her Pumpti. She placed it on a stained paper napkin.

"All we need is venture capital!"

"Um, what's it made of?" wondered Janna.

"Pumpti's substance is human DNA!"

"Whose DNA?" asked Janna.

"Yours, mine, anyone's. The client's." Veruschka picked it up tenderly, palpating the Pumpti with her lacquered fingertips. "This one is made of me. Once I worked at the St. Petersburg Institute of Molecular Science. My boss—well, he was also my boyfriend. . . ." Veruschka pursed her lips. "Wiktor's true obsession was the junk DNA—you know this technical phrase?"

"Trust me, Vero, I'm a genomics engineer."

"Wiktor found a way for these junk codons to express themselves. The echo from the cradle of life, evolution's roadside picnic! To express junk DNA required a new wetware reader. Wiktor called it the Universal Ribosome." She sighed. "We were so happy until the mafiya wanted the return on their funding."

"No National Science Foundation for you guys," mused Janna.

"Wiktor was supposed to tweak a cabbage plant to make opium for the criminals—but we were both so busy growing our dear Pumpti. Wiktor used my DNA, you see. I was smart and saved the data before the Uzbeks

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

smashed up our lab. Now I'm over here with you, Janna, and we will start a great industry of personal pets! Wiktor's hero fate was not in vain. And—"

Janna found Veruschka's grand Russian vision of user-based genomic petware infectious. Despite her natural skepticism, real hope began to dawn. The old Valley dreams had always been the best ones.

What an old-skool, stylin', totally trippy way for Janna to shed her grind-it-out worklife! She and Veruschka Zipkinova would create a start-up, launch the IPO and retire by thirty! Then Janna could escape her life-draining servitude and focus on life's real rewards. Take up oil-painting, go on a safari, and hook up with some sweet guy who understood her. A guy she could really talk to. Not an engineer, and especially not a musician.

Veruschka pitchforked a glob of quiche past her pointed teeth. For her pilgrimage to the source of the world's largest legal creation of wealth in history, the Russian girl hadn't forgotten to pack her appetite.

"Pumpti still needs little bit of, what you say here, tweaking," said Veruschka. The prototype Pumpti sat shivering on its paper napkin. The thing had gone all goose-bumpy, and the bumps were warty: the warts had smaller warts upon them, topped by teensy wartlets with fine, waving hairs. Not exactly a magnet for shoppers.

Stuffed with alfalfa sprouts, Janna put her cutlery aside. Veruschka plucked up Janna's dirty fork, and enthusiastically sucked it clean. She even scratched inside her cheek with the tines.

Janna watched this dubious stunt and decided to stick to business. "How about patents?"

"No one ever inspects Russian gene labs," said Veruschka with a glittery wink. "We Russians are the great world innovators in black market wetware. Our fetal stem cell research, especially rich and good. Plenty of fetus meat in Russia, cheap and easy, all you need! Nothing ever gets patented. To patent is to teach stupid people to copy!"

"Well, do you have a local lab facility?" pressed Janna.

"I have better," said Veruschka, nuzzling her Pumpti. "I have pumptose. The super enzyme of exponential autocatalysis!"

"'Pumptose,' huh? And that means?" prompted Janna.

"It means the faster it grows, the faster it grows!"

Janna finally reached out and delicately touched the Pumpti. Its surface wasn't wet after all, just shiny like super-slick plastic. But—a pet? It seemed more like something little boys would buy to gross-out their sisters. "It's not exactly cuddly," said Janna.

"Just wait till you have your own Pumpti," said Veruschka with a knowing smile.

"But where's the soft hair and big eyes? That thing's got all the shelf appeal of a scabby knee!"

"It's nice to nibble a scab," said Veruschka softly. She cradled her Pumpti, leaned in to sniff it, then showed her strong teeth and nipped off a bit of it.

"God, Veruschka," said Janna, putting down her coffee.

"Your own Pumpti," said Veruschka, smacking, "you are loving him like pretty new shoes. But so much closer and personal! Because Pumpti is you, and you are Pumpti."

Janna sat in wonderment. Then, deep within her soul, a magic casement opened. "Here's how we'll work it!" she exclaimed. "We give away Pumpti pets almost free. We'll make our money selling rip-off Pumpti-care products and accessories!"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Veruschka nodded, eyes shining. "If we're business partners now, can you find me a place to sleep?"

Janna let Veruschka stay in the spare room at her dad's house. Inertia and lack of capital had kept Janna at home after college.

Ruben Gutierrez was a big, soft man with a failing spine, carpal-tunnel and short, bio-bleached hair he wore moussed into a hedgehog's spikes. He had a permanent mirthless grin, the side effect of his daily diet of antidepressants.

Dad's tranquil haze broke with the arrival of Veruschka, who definitely livened up the place with her go-go arsenal of fishnet tights and scoop-necked Lycra tops. With Veruschka around, the TV blared constantly and there was always an open bottle of liquor. Every night the little trio stayed up late, boozing, having schmaltzy confessions, and engaging in long, earnest sophomore discussions about the meaning of life.

Veruschka's contagious warm-heartedness and her easy acceptance of human failing was a tonic for the Gutierrez household. It took Veruschka mere days to worm out the surprising fact that Ruben Gutierrez had a stash of half a million bucks accrued from clever games with his stock options. He'd never breathed a word of this to Shirley or to Janna.

Emotionally alive for the first time in years, Dad offered his hoard of retirement cash for Veruschka's long-shot crusade. Janna followed suit by getting on the Web and selling off her entire Goob collection. When Janna's web money arrived freshly laundered, Dad bought in, and two days later, Janna finally left home, hopefully for good. Company ownership was a three-way split between Veruschka, Janna, and Janna's dad. Veruschka supplied no cash funding, because she had the intellectual property.

Janna located their Pumpti start-up in San Francisco. They engaged the services of an online lawyer, a virtual realtor, and a genomics supply house, and began to build the buzz that, somehow, was bound to bring them major-league venture capital.

Their new HQ was a gray stone structure of columns, arches, and spandrels, the stone decorated with explosive graffiti scrawls. The many defunct banks of San Francisco made spectacular dives for the city's genomics start-ups. Veruschka incorporated their business as "Magic Pumpkin, Inc.," and lined up a three-month lease.

San Francisco had weathered so many gold rushes that its real estate values had become permanently bipolar. Provisionary millionaires and drug-addled derelicts shared the very same neighborhoods, the same painted-lady Victorians, the same flophouses and anarchist bookstores. Sometimes millionaires and lunatics even roomed together. Sometimes they were the very same person.

Enthusiastic cops spewing pepper gas chased the last downmarket squatters from Janna's derelict bank. To her intense embarrassment, Janna recognized one of the squatter refugees as a former Berkeley classmate named Kelso. Kelso was sitting on the sidewalk amidst his tattered Navajo blankets and a damp-spotted cardboard box of kitchen gear. Hard to believe he'd planned to be a lawyer.

"I'm so sorry, Kelso," Janna told him, wringing her hands. "My Russian friend and I are doing this genomics start-up? I feel like such a gross, rough-shod newbie."

"Oh, you'll be part of the porridge soon enough," said Kelso. He wore a big

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

sexy necklace of shiny junked cell-phones. "Just hang with me and get colorful. Want to jam over to the Museum of Digital Art tonight? They're serving calamari, and nobody cares if we sleep there."

Janna shyly confided a bit about her business plans.

"I bet you're gonna be bigger than Pokémon," said Kelso. "I'd always wanted to hook up with you, but I was busy with my pre-law program and then you got into that pod thing with that Korean musician. What happened to him?"

"His mother found him a wife with a dowry from Pyongyang," said Janna. "It was so lovelorn."

"I've had dreams and visions about you, Janna," said Kelso softly. "And now here you are."

"How sweet. I wish we hadn't had you evicted."

"The wheel of fortune, Janna. It never stops."

As if on cue, a delivery truck blocked the street, causing grave annoyance to the local bike messengers. Janna signed for the tight-packed contents of her new office.

"Busy, busy," Janna told Kelso, now more than ready for him to go away. "Be sure and watch our web page. Pumpti dot-bio. You don't want to miss our IPO."

"Who's your venture angel?"

Janna shook her head. "That would be confidential."

"You don't have one, then." Kelso pulled his blanket over his grimy shoulders. "And boy, will you ever need one. You ever heard of Revel Pullen of the Ctenephore Industry Group?"

"Ctenephore?" Janna scoffed. "They're just the biggest piezoplastic outfit on the planet, that's all! My dad used to work for them. And so did I, now that I think about it."

"How about Tug Mesoglea, Ctenephore's Chief Scientist? I don't mean to name-drop here, but I happen to know Dr. Tug personally."

Janna recognized the names, but there was no way Kelso could really know such heavy players. However, he was cute and he said he'd dreamed about her. "Bring 'em on," she said cheerfully.

"I definitely need to meet your partner," said Kelso, making the most of a self-created opportunity. Hoisting his grimy blanket, Kelso trucked boldly through the bank's great bronze-clad door.

Inside the ex-bank, Veruschka Zipkinova was setting up her own living quarters in a stony niche behind the old teller counter. Veruschka had a secondhand futon, a moldy folding-chair, and a stout refugee's suitcase. The case was crammed to brimming with the detritus of subsistence tourism: silk scarves, perfumes, stockings, and freeze-dried coffee.

After one glance at Kelso, Veruschka yanked a handgun from her purse. "Out of my house, *rechniki!* No room and board for you here, *maphiya bezprizorniki!*"

"I'm cool, I'm cool," said Kelso, backpedaling. Then he made a run for it. Janna let him go. He'd be back.

Veruschka hid her handgun with a smirk of satisfaction. "So much good progress already! At last we command the means of production! Today we will make your own Pumpti."

They unpacked the boxed UPS deliveries. "You make ready that crib vat," said Veruschka. Janna knew the drill; she'd done this kind of work at Triple Helix. She got a wetware crib vat properly filled with base-pairs and

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

warmed it up to standard operating temperature. She turned the valves on the bovine growth serum, and a pink threading began to fill the blood-warm fluid.

Veruschka plugged together the components of an Applied Biosystems oligosynthesis machine. She primed it with a data-stuffed S-cube that she'd rooted out of the twine-tied plastic suitcase.

"In Petersburg, we have unique views of DNA," said Veruschka, pulling on her ladylike data gloves and staring into the synthesizer's screen. Her fingers twitched methodically, nudging virtual molecules. "Alan Turing, you know of him?"

"Sure, the Universal Turing Machine," Janna core-dumped. "Foundations of Computer Science. Breaking the Enigma code. Reaction-diffusion rules; Turing wrote a paper to derive the shapes of patches on brindle cows. He killed himself with a poison apple. Alan Turing was Snow White, Queen and Prince all at once!"

"I don't want to get too technical for your limited mathematical background," Veruschka hedged.

"You're about to tell me that Alan Turing anticipated the notion of DNA as a program tape that's read by ribosomes. And I'm not gonna be surprised."

"One step further," coaxed Veruschka. "Since the human body uses one kind of ribosome, why not replace that with another? The Universal Ribosome—it reads in its program as well as its data before it begins to act. All from that good junk DNA, yes Janna? And what is junk? Your bottom drawer? My garbage can? Your capitalist attic, and my start-up garage!"

"Normal ribosomes skip right over the junk DNA," said Janna. "It's supposed to be meaningless to the modern genome. Junk DNA is just scribbled-over things. Like the crossed-out numbers in an address book. A palimpsest. Junk DNA is the half-erased traces of the original codes—from long before humanity."

"From before, and—maybe *after,* Wiktor was always saying." Veruschka glove-tapped at a long-chain molecule on the screen. "There is pumptose!" The gaudy molecule had seven stubby arms, each of them a tightly wound mass of smaller tendrils. She barked out a command in Russian. The S-cube-enhanced Applied Biosystems unit understood, and an amber bead of oily, fragrant liquid oozed from the output port. Veruschka neatly caught the droplet in a glass pipette.

Then she transferred it to the crib vat which Janna had prepared. The liquid shuddered and roiled, jolly as the gut of Santa Claus.

"That pumptose is rockin' it," said Janna, marveling at the churning rainbow oil-slick.

"We going good now, girl," winked Veruschka. She opened her purse and tossed her own Pumpti into the vat. "A special bath-treat for my Pumpti," she said. Then, with a painful wince, she dug one of her long fingernails into the lining of her mouth.

"Yow," said Janna.

"Oh, it feels so good to pop him loose," said Veruschka indistinctly. "Look at him."

Nestled in the palm of Veruschka's hand was a lentil-shaped little pink thing. A brand-new Pumpti. "That's your own genetics from your dirty fork at the diner," said Veruschka. "All coated with trilobite bile, or some other decoding from your junk DNA." She dropped the bean into the vat.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"This is starting to seem a little bent, Veruschka."

"Well . . . you never smelled your own little Pumpti. Or tasted him. How could you not bite him and chew him and grow a new scrap in your mouth? The sweet little Pumpti, you just want to eat him all up!"

Soon a stippling of bumps had formed on the tiny scrap of flesh. Soft little pimples, twenty or a hundred of them. The lump cratered at the top, getting thicker all around. It formed a dent and invaginated like a sea-squirt. It began pumping itself around in circles, swimming in the murky fluids. Stubby limbs formed momentarily, then faded into an undulating skirt like the mantle of a cuttlefish.

Veruschka's old Pumpti was the size of a grapefruit, and the new one was the size of a golf ball. The two critters rooted around the tank's bottom like rats looking for a drain hole.

Veruschka rolled up her sleeve and plunged her bare arm into the big vat's slimy fluids. She held up the larger Pumpti; it was flipping around like a beached fish. Veruschka brought the thing to her face and nuzzled it.

It took Janna a couple of tries to fish her own Pumpti out of the vat, as each time she touched the slimy thing she had to give a little scream and let it go. But finally she had the Pumpti in her grip. It shaped itself to her touch and took on the wet, innocent gleam of a big wad of pink bubblegum.

"Smell it," urged Veruschka.

And, Lord yes, the Pumpti did smell good. Sweet and powdery, like clean towels after a nice hot bath, like a lawn of flowers on a summer morn, like a new dress. Janna smoothed it against her face, so smooth and soft. How could she have thought her Pumpti was gnarly?

"Now you must squeeze him to make him better," said Veruschka, vigorously mashing her Pumpti in her hands. "Knead, knead, knead! The Pumpti pulls skin cells from the surface of your hands, you know. Then pumptose reads more of the junk DNA and makes more good tasty proteins." She pressed her Pumpti to her cheek, and her voice went up an octave. "Getting more of that yummy yummy wetware from me, isn't he? Squeezy-squeezy Pumpti." She gave it a little kiss.

"This doesn't add up," said Janna. "Let's face it, an entire human body only has like ten grams of active DNA. But this Pumpti, it's solid DNA like a chunk of rubber, and hey, it's almost half a kilo! I mean, where's *that* at?"

"The more the better," said Veruschka patiently. "It means that very quickly Pumpti code can be recombining his code. Like a self-programming Turing machine. Wiktor often spoke of this."

"But it doesn't even look like DNA," said Janna. "There's scraps of it in all the labs at Triple Helix. I messed with that stuff every day. It looks like lint or dried snot."

"Pumpti is smooth because he's making nice old proteins from the ancient junk of the DNA. All our human predecessors from the beginning of time, amphibians, lemurs, maybe intelligent jellyfish saucers from Mars—who knows what. But every bit is my very own junk, of my very own DNA. So stop thinking so hard, Janna. Love your Pumpti."

Janna struggled not to kiss her pink glob. The traceries of pink and yellow lines beneath its skin were like the veins of fine marble.

"Your Pumpti is very eager," said Veruschka, reaching for it. "Now, into the freezer! We will store it, to show our financial backers."

"What?!" said Janna. She felt a sliver of ice in her heart. "Freeze my Pumpti? Freeze your own Pumpti, Vero."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"I need mine," snapped Veruschka.

To part from her Pumpti—something within her passionately rebelled. In a dizzying moment of raw devotion Janna suddenly found herself sinking her teeth into the unresisting flesh of the Pumpti. Crisp, tasty, spun cotton candy, deep-fried puffball dough, a sugared beignet. And under that a salty, slightly painful flavor—bringing back the memory of being a kid and sucking the root of a lost tooth.

"Now you understand," said Veruschka with a throaty laugh. "I was only testing you! You can keep your sweet Pumpti, safe and sound. We'll get some dirty street bum to make us a Pumpti for commercial samples. Like that stupid boy you were talking to before." Veruschka stood on tiptoe to peer out of the bank's bronze-mullioned window. "He'll be back. Men always come back when they see you making money."

Janna considered this wise assessment. Kelso was coming on pretty strong, considering that he'd never talked to her at school. "His name is Kelso," said Janna. "I went to Berkeley with him. He says he's always wanted me."

"Get some of his body fluid."

"I'm not ready for that," said Janna. "Let's just poke around in the sink for his traces." And, indeed, they quickly found a fresh hair to seed a Kelso Pumpti, nasty and testicular, suitable for freezing.

As Veruschka had predicted, Kelso himself returned before long. He made it his business to volunteer his aid and legal counsel. He even claimed that he'd broached the subject of Magic Pumpkin to Tug Mesoglea himself. However, the mysterious mogul failed to show up with his checkbook, so Magic Pumpkin took the path of viral marketing.

Veruschka had tracked down an offshore Chinese ooze farm to supply cheap culture medium. In a week, they had a few dozen Pumpti starter kits for sale. They came in a little plastic tub of pumptose-laced nutrient, all boxed up in a flashy little design that Janna had printed out in color.

Kelso had the kind of slit-eyed street smarts that came only from Berkeley law classes. He chose Fisherman's Wharf to hawk the product. Janna went along to supervise his retail effort.

It was the start of October now, a perfect fog-free day for the commercial birth of Magic Pumpkin. A visionary song of joy seemed to rise from the sparkling waters of San Francisco Bay, echoing from the sapphire dome of the California sky. Even the tourists could sense the sweetness of the occasion. They hustled cheerfully round Kelso's fold-out table, clicking away with little biochip cameras.

Kelso spun a practiced line of patter while Janna publicly adored her Pumpti. She'd decked Pumpti out in a special sailor suit, and she kept tossing him high into the air and laughing.

"Why is this woman so happy?" barked Kelso. "She's got a Pumpti. Better than a baby, better than a pet, your Pumpti is all you! Starter kits on special today for the unbelievably low price of—"

Over the course of a long morning, Kelso kept cutting the offering price of the Pumpti kits. Finally a runny-nosed little girl from Olympia, Washington, took the bait.

"How do I make one?" she wanted to know. "What choo got in that kit?" And, praise the Holy Molecule, her parents didn't drag her away, they just stood there watching their little darling shop.

The First Sale. For Janna, it was a moment to treasure forever. The little

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

girl with her fine brown hair blowing in the warm afternoon wind, the dazedly smiling parents, Kelso's abrupt excited gestures as he explained how to seed and grow the Pumpti by planting a kiss on a scrap of Kleenex and dropping it into the kit's plastic jar. The feel of those worn dollar bills in her hand, and the parting wave of little Customer Number One. Ah, the romance of it!

Now that they'd found their price point, more sales followed. Soon, thanks to word of mouth, they began moving units from their website.

Janna's dad, who had a legalistic turn of mind, had warned them to hold off any postal or private-carrier shipments until they had federal approval. Ruben took a sample Pumpti before the San Jose branch office of the Genomics Control Board. He argued that, since the Pumptis were neither self-reproducing nor infectious, they didn't fall under the strict provisions of the Human Heritage Home Security Act.

The consequent investigation made the Bay Area news shows. Then the right-wing religious crowd got in on it. An evangelist from Alameda appeared at one of the hearings—he'd confiscated a Pumpti from a young parishioner—and after his impassioned testimony he tore the Pumpti apart with pincers on the San Jose Federal Building's steps, calling the unresisting little glob the "spawn of Satan."

This was catnip for their business, of course. Magic Pumpkin's website gathered a bouquet of orders from eager early adopters.

But, paradoxically, Magic Pumpkin's flowering sales bore the slimy seeds of a smashing fiscal disaster. When an outfit started small, it didn't take much traffic to double production every week. This constant doubling brought on raging production bottlenecks and serious crimps in their cash flow. In point of fact, in pursuit of market establishment, they were losing money on each Pumpti sold. The eventual payback from all those Pumpti accessories was still well down the road.

Janna was bored by their practical difficulties, but she had a ball inventing high concepts for Pumpti care products and Pumpti collectibles. Kelso's many art-scene friends were happy to sign up. Kelso was a one-man recruiting whiz. Buoyed by his worldly success, he began to shave more often and even use deodorant. He was so pleased by his ability to sucker people into the Magic Pumpkin enterprise that he even forgot to make passes at Janna.

Every day-jobber in the start-up was quickly issued his or her own free Pumpti. "Magic Pumpkin wants missionaries, not mercenaries," Janna announced from on high, and her growing cluster of troops cheered her on. Owning a personal Pumpti was an item of faith in the little company—the linchpin of their corporate culture. You couldn't place yourself in the proper frame of mind for Magic Pumpkin product development without your very own darling roly-poly.

Cynics had claimed that the male demographic would never go for Pumptis. Why would any guy sacrifice his computer gaming time and his weekend bicycling to nurture something? But once *presented* with their own Pumpti, men found that it filled some deep need in the masculine soul. They swelled up with competitive pride in their Pumptis, and even became quite violent in their defense.

Janna lined up an comprehensive array of related products. First and foremost were costumes. Sailor Pumpti, Baby Pumpti, Pumpti Duckling, Angel Pumpti, Devil Pumpti, and even a Goth Pumpti dress-up kit with

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

press-on tattoos. They shrugged off production to Filipina doll-clothes-makers in a sweatshop in East L.A.

Further up-market came a Pumpti Backpack for transporting your Pumpti in style, protecting it from urban pollution and possibly nasty bacteria. This one seemed like a sure hit, if they could swing the Chinese labor in Shenzhen and Guangdong.

The third idea, Pumpti Energy Crackers, was a no-brainer: crisp collectible cards of munchable amino acid bases to fatten up your Pumpti. If the crackers used the "mechanically recovered meat" common in pet food and cattle feed, then the profit margin would be primo. Kelso had a contact for this in Mexico: they guaranteed their cookies would come crisply printed with the Pumpti name and logo.

Janna's fourth concept was downright metaphysical: a "Psychic Powers Pumpti Training Wand." Except for occasional oozing and plopping, the Pumptis never actually managed conventional pet tricks. But this crystal-topped gizmo could be hawked to the credulous as increasing their Pumpti's "empathy" or "telepathy." A trial mention of this vaporware on the Pumpti-dot-bio website brought in a torrent of excited New Age emails.

The final, sure-thing, Pumpti accessory was tie-in books. Two of Kelso's many unemployed writer and paralegal friends set to work on the *Pumpti User's Guide.* The firm forecast an entire *library* of guides, sucking up shelf-space at chain stores and pet stores everywhere. *The Moron's Guide to Computational Genomics. Pumpti Tips, Tricks and Shortcuts. Backing Up Your Pumpti. Optimize Your Pumpti for High Performance.* The *Three Week Pumpti Guide,* the *One Day Pumpti Guide* and the *Ten Minute Pumpti Guide.* The *Pumpti Bible,* with the quick-start guide, walkthrough, lists, maps and Pumpti model index. *Pumpti Security Threats: How to Protect Your Pumpti From Viral DNA Hacks, Trojan Goo Horses, and Unauthorized Genetic Access.* And more, more, more!

But moving from high-vaporware to the street proved difficult. Janna had never quite realized that manufacturing real, physical products was so much harder than just thinking them up. Magic Pumpkin failed to do its own quality control, so the company was constantly screwed by fly-by-nighters. Subcontractors were happy to take their money, but when they failed to deliver, they had Magic Pumpkin over a barrel.

The doll costumes were badly sized. The Pumpti Backpacks were ancient Hello Kitty backpacks with their logos covered by cheap paper Pumpti stickers. The crackers were dog biscuits with the stinging misprint "Pupti." The "telepathic" wand sold some units, but the people nuts enough to buy it tended to write bad checks or have invalid credit card numbers. As for the User's Guides, the manuscripts were rambling and self-indulgent, long on far-fetched jokes yet critically short on objective scientific facts.

One ugly roadblock was finally removed when the Genomics Control Board came through with their blessing. The Pumptis were deemed harmless, placed in the same schedule-category as home gene-testing kits. Magic Pumpkin was free to ship throughout the nation!

But now that their production lines were stabilized, now that their catalogs were finally proofed and printed, now that their ad campaign was finally in gear, their fifteen minutes of ballroom glamour expired. The pumpkin clock struck midnight. The public revealed its single most predictable trait: fickleness.

Instantly, without a whimper of warning, Magic Pumpkin was deader

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

than pet rocks. They never shipped to the Midwest or the East Coast, for the folks in those distant markets were sick of hearing about the Pumptis before they ever saw one on a shelf.

Janna and Veruschka couldn't make payroll. Their lease was expiring. They were cringing for cash.

A desperate Janna took the show on the road to potential investors in Hong Kong, the toy capital of the world. She emphasized that Magic Pumpkin had just cracked the biggest single technical problem: the fact that Pumptis looked like slimy blobs. Engineering-wise, it all came down to the pumptose-based Universal Ribosome. By inserting a properly tweaked look-up string, you could get it to express the junk DNA sequences in customizable forms. Programming this gnarly cruft was, from an abstract computer-science perspective, "unfeasible," meaning that, logically speaking, such a program could never be created within the lifetime of the universe.

But Janna's dad, fretful about his investment, had done it anyway. In two weeks of inspired round-the-clock hacking, Ruben had implemented the full OpenAnimator graphics library, using a palette of previously unused rhodopsin-style proteins. A whiff of the right long-chain molecule could give your Pumpti any mesh, texture, color-map, or attitude matrix you chose. Not to mention overloaded frame-animation updates keyed into the pumptose's ribosomal time-steps! It was a techie miracle!

Dad had even flown along to Hong Kong to back Janna's pitch, but the Hong Kong crowd had no use for software jargon in American English. The overwrought Ruben killed the deal by picking fights over intellectual property—no way to build partnerships in Hong Kong.

Flung back to San Francisco, Janna spent night after night frantically combing the Web, looking for any source of second-round venture capital, no matter how far-fetched.

Finally she cast herself sobbing into Kelso's arms. Kelso was her last hope. Kelso just had to come through for them: he had to bring in the seasoned business experts from Ctenophore, Inc., the legendary masters of jellyfish A-Life.

"Listen, babe," said Kelso practically, "I think you and the bio-Bolshevik there have already taken this concept just about as far as any sane person oughta push it. Farther, even. I mean, sure, I recruited a lot of my cyber-slacker friends into your corporate cult here, and we promised them the moon and everything, so I guess we'll look a little stupid when it Enrons. They'll bitch and whine, and they'll feel all disenchanted, but come on, this is San Francisco. They're used to that here. It's genetic."

"But what about my dad? He'll lose everything! And Veruschka is my best friend. What if she shoots me?"

"I'm thinking you, me, and Mexico," said Kelso dreamily. "Way down on the Pacific coast—that's where my mother comes from. You and me, we've been working so hard on this start-up that we never got around to the main event. Just dump those ugly Pumptis in the Bay. We'll empty the cash box tonight, and catch a freighter blimp for the South. I got a friend who works for Air Jalisco."

It was Kelso's most attractive offer, maybe even sincere, in its way. Janna knew full well that the classic dot-com move was to grab that golden parachute and bail like crazy before the investors and employees caught on. But Magic Pumpkin was Janna's own brain-child. She was not yet a serial en-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

trepreneur, and a boyfriend was only a boyfriend. Janna couldn't walk away from the green baize table until that last, final spin of the wheel.

It had been quite some time since Ctenephore Inc. had been a cutting edge start-up. The blazing light of media tech-hype no longer escaped their dense, compact enterprise. The firm's legendary founders, Revel Pullen and Tug Mesoglea, had collapsed in on their own reputations. Not a spark could escape their gravity. They had become twin black holes of biz weirdness.

Ctenophore's main line of business had always been piezoplastic products. Ctenephore had pumped this protean, blobject material into many crazy scenes in the California boom years. Bathtub toys, bondage clothing, industrial-sized artificial-jellyfish transport blimps—and Goob dolls as well! GoobYoob, creator of the Goob dolls, had been one of Ctenephore's many Asian spin-offs.

As it happened, quite without Janna's awareness, Ctenophore had already taken a professional interest in the workings of Magic Pumpkin. GoobYoob's manufacturing arm, Boogosity, had been the Chinese ooze-farm supplier for Pumpti raw material. Since Boogosity had no advertising or marketing expenses, they'd done much better by the brief Pumpti craze than Magic Pumpkin itself.

Since Magic Pumpkin was going broke, Boogosity faced a production glut. They'd have to move their specialty goo factories back into the usual condoms and truck tires. Some kind of corporate allegiance seemed written in the stars.

Veruschka Zipkinova was transfixed with paranoia about Revel Pullen, Ctenophore's Chairman of the Board. Veruschka considered major American capitalists to be sinister figures—this conviction was just in her bones, somehow—and she was very worried about what Pullen might do to Russia's oil.

Russia's black gold was the life-blood of its pathetic, wrecked economy. Years ago Revel Pullen, inventively manic as always, had released gene-spliced bacteria into America's dwindling oil reserves. This fatal attempt to increase oil production had converted millions of barrels of oil into (as chance would have it) raw piezoplastic. Thanks to the powerful Texas lobby in Washington, none of the lawsuits or regulatory actions against Ctenophore had ever succeeded.

Janna sought to calm Veruschka's jitters. If the company hoped to survive, they had to turn Ctenophore into Magic Pumpkin's fairy godmother. The game plan was to flatter Pullen, while focusing their persuasive efforts on the technical expert of the pair. This would be Ctenophore's chief scientist, a far-famed mathematician named Tug Mesoglea.

It turned out that Kelso really did know Tug Mesoglea personally, for Mesoglea lived in a Painted Lady mansion above the Haight. During a protracted absence to the Tweetown district of Manchester (home of the Alan Turing Memorial), Tug had once hired Kelso to baby-sit his jellyfish aquarium.

Thanks to San Francisco's digital grapevine, Tug knew about the eccentric biomathematics that ran Pumptis. Tug was fascinated, and not by the money involved. Like many mathematicians, Mesoglea considered money to be one boring, merely bookkeeping subset of the vast mental universe of general computation. He'd already blown a fortune endowing chairs in set theory, cellular automata, and higher-dimensional topology. Lately, he'd published widely on the holonomic attractor space of human dreams, pro-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ducing a remarkable proof that dreams of flight were a mathematical inevitability for a certain fixed percentage of the dreams—this fixed percentage number being none other than Feigenbaum's chaos constant, 4.6692.

Veruschka scheduled the meet at a Denny's near the Moffat Field blimp port. Veruschka had an unshakeable conviction that Denny's was a posh place to eat, and the crucial meeting had inspired her to dress to the nines.

"When do they want to have sex with us?" Veruschka fretted, paging through her laminated menu.

"Why would they want to do that?" said Janna.

"Because they are fat capitalist moguls from the West, and we are innocent young women. Evil old men with such fame and money, what else can they want of us? They will scheme to remove our clothing!"

"Well, look, Tug Mesoglea is gay." Janna looked at her friend with concern. Veruschka hadn't been sleeping properly. Stuck on the local grind of junk food and eighty-hour weeks, Veruschka's femme-fatale figure was succumbing to Valley hacker desk-spread. The poor thing barely fit in her designer knock-offs. It would be catty to cast cold water on her seduction fantasies, but really, Veruschka was swiftly becoming a kerchiefed babushka with a string-bag, the outermost shell of some cheap nest of Russian dolls.

Veruschka picked up her Pumpti, just now covered in baroque scrolls like a fin-de-siècle picture frame. "Do like this," she chirped, brushing the plump pet against her fluffy marten-fur hat. The Pumpti changed its surface texture to give an impression of hairiness, and hopped onto the crown.

"Lovely," said Veruschka, smiling into her hand mirror. But her glossy smile was tremulous.

"We simply must believe in our product," said Veruschka, pep-talking to her own mirror. She glanced up wide-eyed at Janna. "Our product is so good a fit for their core business, no? Please tell me more about them, about this Dr. Tug and Mr. Revel. Tell me the very worst. These gray haired, lecherous fat-cats, they are world-weary and cynical! Success has corrupted them and narrowed their thinking! They no longer imagine a brighter future, they merely go through the rote. Can they be trusted with our dreams?"

Janna tugged fitfully at the floppy tie she'd donned to match her dress-for-success suit. She always felt overwhelmed by Veruschka's fits of self-serving corn. "It's a biz meeting, Vero. Try to relax."

Just as the waitress brought them some food, the glass door of the Denny's yawned open with a ring and a squeak. A seamy, gray haired veteran with the battered look of a bronco-buster approached their table, with a bowlegged scuff.

"I'm Hoss Jenks, head o' security for Ctenophore." Jenks hauled out a debugging wand and a magnetometer. He then swept his tools with care over the pair of them. The wand began beeping in frenzy.

"Lemme hold on to your piece for you, ma'am," Jenks suggested placidly.

"It's just a sweet little one," Veruschka demurred, handing over a pistol.

Tug Mesoglea tripped in moments later, sunburned and querulous. The mathematician sported a lavender dress-shirt and peach-colored ascot, combined with pleated khaki trail-shorts and worn-out piezoplastic Gripper sandals.

Revel Pullen followed, wearing a black linen business suit, snakeskin boots, and a Stetson. Janna could tell there was a bald pate under that high hat. Jenks faded into a nearby booth, where he could shadow his employers and watch the door.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Mesoglea creaked into the plastic seat beside Veruschka and poured himself a coffee. "I phoned in my order from the limo. Where's my low-fat soy protein?"

"Here you go, then," said Janna, eagerly shoving him a heaped plate of pseudo-meat.

Pullen stared as Mesoglea tucked in, then fastidiously lit a smokeless cigarette. "I don't know how the hell this man eats the food in a sorry-ass chain store."

"I believe in my investments," Mesoglea said, munching. "You see, ladies, this soy protein derives from a patented Ctenophore process." He prodded at Veruschka's plate. "Did you notice that lifelike, organic individuality of your waffle product? That's no accident, darling."

"Did we make any real foldin' money off that crap?" said Revel Pullen.

"Of course we did! You remember all those sintered floating gel rafts in the giant tofu tanks in Chiba?" Mesoglea flicked a blob of molten butter from his ascot.

"Y'all don't pay no never mind to Dr. Mesoglea here," Revel counter-advised. "Today's economy is all about diversity. Pro-active investments. Buying into the next technical wave, before you get cannibalized." Revel leered. "Now as for me, I get my finger into every techno-pie!" His lipless mouth was like a letter-slot, bent slightly upward at the corners to simulate a grin.

"Let me brief you gentlemen on our business model," said Janna warily. "It's much like your famous Goob dolls, but the hook here is that the Pumpti is made of the user's very own DNA. This leads to certain, uh, powerful consumer bonding effects, and . . ."

"Oh good, let's see your Pumptis, girls," crooned Tug, with a decadent giggle. "Whip out your Pumptis for us."

"You've never seen our product?" asked Janna.

"Tug's got a mess of 'em," said Revel. "But y'all never shipped to Texas. That's another thing I just don't get." Pullen produced a sheaf of printout, and put on his bifocals. "According to these due-diligence filings, Magic Pumpkin's projected on-line capacity additions were never remotely capable of meeting the residual in-line demand in the total off-line market that you required for breakeven." He tipped back his Stetson, his liver-spotted forehead wrinkling in disbelief. "How in green tarnation could you gals overlook that? How is that even possible?"

"Huh?" said Janna.

Revel chuckled. "Okay, now I get it. Tug, these little gals don't know how to do business. They've never been anywhere near one."

"Sure looks that way," Tug admitted. "No MBA's, no accountants? Nobody doing cost control? No speakers-to-animals in the hacker staff? I'd be pegging your background as entry-level computational genomics," he said, pointing at Janna. Then he waggled his finger at Veruschka, "And you'd be coming from—Slavic mythology and emotional blackmail?"

Veruschka's limpid eyes went hard and blue. "I don't think I want to show you men my Pumpti."

"We kind of have to show our Pumptis, don't we?" said Janna, an edge in her voice. "I mean, we're trying to make a deal here."

"Don't get all balky on the bailout men," added Revel, choking back a yawn of disdain. He tapped a napkin to his wrinkled lips, with a glint of diamond solitaire. He glanced at his Rolex, reached into his coat pocket and took out a little pill. "That's for high blood pressure, and I got it the hard

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

way, out kickin' ass in the market. I got a flight back to Texas in less than two hours. So let's talk killer app, why don't we? Your toy pitch is dead in the water. But Tug says your science is unique. So the question is: where's the turnaround?"

"They're getting much prettier," Janna said, swiftly hating herself.

"Do y'all think Pumptis might have an app in home security?"

Janna brightened. "The home market?"

"Yeah, that's right, Strategic Defense for the Home." Pullen outlined his scheme. Ever the bottom-feeder, he'd bought up most of the patents to the never-completed American missile defense system. Pullen had a long-cherished notion of retrofitting the Star Wars shield into a consumer application for troubled neighborhoods. He had a hunch that Pumptis might meet the need.

Revel's proposal was that a sufficiently tough-minded, practical Pumpti could take a round to the guts, fall to earth, crawl back to its vat in the basement and come back hungry for more. So if bullets were fired at a private home from some drug-crazed drive-by, then a rubbery unit of the client's Pumpti Star Wars shield would instantly fling itself into the way.

Veruschka batted her eyes at Pullen. "I love to hear a strong man talk about security."

"Security always soars along with unemployment," said Pullen, nodding his head at his own wisdom. "We're in a major downturn. I seen this before, so I know the drill. Locks, bolts, Dobermans, they're all market leaders this quarter. That's Capitalism 301, girls."

"And you, Ctenephore, you would finance Magic Pumpkin as a home-defense industry?" probed Veruschka.

"Maybe," said Pullen, his sunken eyes sly. "We'd surely supply you a Washington lobbyist. New public relations. Zoning clearances. Help you write up a genuine budget for once. And of course, if we're on board, then y'all will have to dump all your crappy equipment and become a hunnert-percent Ctenephore shop, technologically. Ctenephore sequencers, PCRs, and bioinformatic software. That's strictly for your own safety, you understand: stringent quality assurance, functional testing and all."

"Uhm, yeah," nodded Tug. "We'd get all your intellectual property copyrighted and patented straight with the World Intellectual Property Organization. The lawyer fees, we'll take care of that. Ctenophore is downright legendary for our quick response time to a market opportunity."

"We gonna help you youngsters catch the fish," said Pullen smugly. "Not just give you a damn fish. What'd be the fun in that? Self-reliance, girls. We wanna see your little outfit get up and walk, under our umbrella. You sign over your founder's stock, put in your orders for our equipment—and we ain't gonna bill for six months—then my men will start to shake the money tree."

"Wait, they still haven't shown us their Pumptis," said Tug, increasingly peevish. "And, Revel, you need to choke it back to a dull roar with those Star Wars lawn jockeys. Because I can grok ballistic physics, dude, and that crap never flies." Tug muffled a body sound with his napkin. "I ate too many waffles."

Janna felt like flipping the table over into their laps. Veruschka shot her a quick, understanding glance and laid a calming hand on her shoulder. Veruschka played a deep game.

Veruschka plucked the Pumpti from her furry hat and set it on the table.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Tug did a double take and leaned forward, transfixed

Veruschka segued into her cuddly mode. "Pumpti was created in a very special lab in Petersburg. In the top floor of old Moskfilm complex, where my friends make prehistoric amber jewelry. You can see the lovely River Neva while you hunt for dinosaur gnats—"

As she put the squeeze on their would-be sponsors, Veruschka compulsively massaged her Pumpti. She was working it, really getting into it finger and thumb, until suddenly a foul little clot of non-working protein suddenly gave way inside, like popping bubble-pack.

"Stop it, Vero," said Janna.

Tug daintily averted his gaze as Veruschka sucked goo from her fingers.

"Look at mine," offered Janna. She'd programmed her Pumpti to look rubbery and sleek, like a top-end basketball shoe.

"Hey, any normal kid would kill to have one of those," said Revel cheerily. "I'm having me another product brainstorm! It's risin' in me like a thunderhead across Tornado Alley!"

"The junk DNA is the critical aspect," put in Tug, forestalling another windy bout of Revel's visions. "Those are traces of early pre-human genomics. If we can really express those primordial codons, we might—"

"Those globbies suck the DNA right off people's fingers, right?" demanded Revel.

"Well, yes," said Janna.

"Great! So that's my Plan B. Currency! You smash 'em out flat and color 'em pretty. As they daisy-chain from hand to hand, they record the DNA of every user. Combine those with criminal DNA files, and you got terrorist-proof cash!"

"But the mafiya always wears gloves," said Veruschka.

"No problem, just turn up the amps," said Pullen. "Have 'em suck DNA fragments out of the dang air." He wiggled his lower jaw to simulate deep thought. "Those little East European currencies, they're not real cash money anyways! That user-base won't even know the difference!"

Mesoglea blinked owlishly. "Bear with us, ladies. Revel's always like this right after he takes his medicine."

"Now Tug, we gotta confront the commercial possibilities! You and I, we could hit the lab and make some kind of money that only works for white males over fifty. If anybody else tries to pass it, it just, like—bites their dang hands off!" Pullen chuckled richly, then had another drag off his cig. "Or how about a hunnert-dollar bill that takes your DNA and grows your own face on the front!"

Mesoglea sighed, looked at his watch, and shook it theatrically.

"But this is such pure genius!" gushed Veruschka, leaning toward Revel with moistening eyes. "We need your veteran skills. Magic Pumpkin needs grown men in the boardroom. We wasted our money on incompetent artists and profiteers! We had great conceptual breakthroughs, but—"

"Can it with the waterworks and cut to the chase, ptista," said Pullen. "It's high time for you amateurs to hand over."

"Make us the offer," said Janna.

"Okay, cards on the table," said Pullen, fixing her with his hard little eyes. "You'll sign all your founder's stock over to us. I'll take your stock, chica, and Tug'll take your pretty Russian friend's. That'll give us controlling interest. As for your dad's third, he might as well keep it since he's too maverick to deal with. Dad's in clover. Okay?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Where's the cash?" said Janna. "I don't believe this. The Pumpti was our original idea!"

"You sign on with us, you get a nice salary," said Pullen. Then he broke into such cackles that he had to sip ice water and dab at his eyes with a kerchief.

"You two kids really are better off with a salary," added Tug in a kindly tone. "It won't be anything huge, but better than your last so-called jobs. We already checked into your histories. You'll get some nice vague titles too. That'll be good experience for your next job or, who knows, your next start-up."

"The sexy Russki can be my Pumpti Project Manager," said Pullen. "She can fly down to my ranch tomorrow. I'll be waitin'. And what about the other one, Tug? She's more the techie type."

"Yes, yes, I want Janna," said Tug, beaming. "Executive Assistant to the Chief Scientist."

Janna and Veruschka exchanged unhappy glances.

"How—how big of a salary?" asked Janna, hating herself.

After the fabled entrepreneurs departed the Denny's in the company of a watchful Hoss Jenks, Veruschka dropped her glued-on smile and scrambled for the kitchen. She was just in time to save the abandoned forks before they hit the soapy water.

Shoving a busboy aside, Veruschka wrapped the DNA-soiled trophies in a sheet of newspaper and stuffed them into her purse.

"Veruschka, what do you think you're doing?"

"I'm multiplying our future options. I am seizing the future imperfectly. Visualize, realize, actualize," Veruschka recited, her lower lip trembling. "Leap, and the Net will appear."

Stuck in the clattering kitchen of Denny's, feeling sordid and sold-out, Janna felt a moment of true sorrow for herself, for Vero, and even for the Latino and Vietnamese busboys. Poor immigrant Veruschka, stuck in some foreign country, with an alien language—she'd seen her grandest dreams seized, twisted up, and crushed by America, and now, in her valiant struggle to rise from ash-heap to princess, she'd signed on to be Pullen's marketeer droid. As for Janna—she'd be little more than a lab assistant.

At least the business was still alive. Magic Pumpkin was still a market player. Even if it wasn't her business anymore.

When they returned to their San Francisco lair, they discovered that Hoss Jenks had arrived with a limo full of men in black suits and mirrorshades. They had seized the company's computers and fired everyone. To make things worse, Jenks had called the police and put an APB out for Kelso, who had last been seen departing down a back alley with a cardboard box stuffed with the company's petty cash.

"I can't believe that horrible old cowboy called the cops on Kelso," Janna mourned, sitting down in the firm's very last cool, swoopy Blobular Concepts chair. "I'm glad Kelso stole that money, since it's not ours anymore. I hope he'll turn up again. I never even got to make out with him."

"He's gay, you know."

"Look, Kelso is *not gay,*" yelled Janna. "He is so totally not gay. There's a definite chemistry between us. We were just too incredibly busy, that's all."

Veruschka sniffed and said nothing. When Janna looked up, her eyes brimming, she realized that Veruschka was actually feeling sorry for her.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

This was finally it for Janna; it was too much for flesh and blood to bear; she bent double in her designer chair, racked with sobs.

"Janna, my dear, don't surrender to your grief. I know things look dark now, but the business cycle, always, it turns around. And California is the Golden State."

"No it isn't. We've got a market bear stitched right on our flag. We're totally doomed, Veruschka! We've been such fools!"

"I hate those two old men," said Veruschka, after the two of them had exhausted half a box of Kleenex. "They're worse than their reputations. I expected them to be crazy, but not so—greedy and rude."

"Well, we signed all their legal papers. It's a little late to fuss now."

Veruschka let out a low, dark chuckle. "Janna, I want revenge."

Janna looked up. "Tell me."

"It's very high tech and dangerous."

"Yeah?"

"It's completely illegal, or it would be, if any court had the chance to interpret the law in such a matter."

"Spill it, Vero."

"Pumpti Gene Therapy."

Janna felt a twinge, as of seasickness. "That's a no-no, Vero."

"Tell me something," said Veruschka. "If you dose a man with an infectious genomic mutagen, how do you keep him from knowing he's been compromised?"

"You're talking bioterrorism, Vero. They'd chase us to the ends of the earth in a rain of cruise missiles."

"You use a Pumpti virus based on your victim's own DNA," said Veruschka, deftly answering her own rhetorical question. "Because nobody has an immune response to their own DNA. No matter how—how very strange it might be making their body."

"But you're weaponizing the human genome! Can't we just shoot them?"

Veruschka's voice grew soft and low. "Imagine Tug Mesoglea at his desk. He feels uneasy, he begins to complain, his voice is like a rasping locust's. And then his eyeballs—his eyeballs pop out onto his cheeks, driven from his head by the pressure of his bursting brain!"

"You call *that* gene therapy?"

"They *need* it! The shriveled brains of Pullen and Mesoglea are old and stiff! There is plenty of room for new growth in their rattling skulls. You and I, we create the Pumpti Therapy for them. And then they will give us money." Veruschka twirled on one heel and laughed. "We make Pumptis so tiny like a virus! Naked DNA with Universal Ribosome and a nine-plus-two microtubule apparatus to rupture the host's cell walls! One strain for Pullen, and one for Mesoglea. The Therapy is making them smarter, so they are grateful to shower money upon us. Or else," her eyes narrowed, "the Therapy is having some unpleasant effects and they are begging on their knees to purchase an antidote."

"So it's insanity and/or blackmail, in other words."

"These men are rotten bastards," said Veruschka.

"Look, why don't we give a fighting chance to the home defense Pumptis?" asked Janna. "Or the money Pumptis? They're nutty ideas, but not all that much crazier than your original scheme about pets. Didn't I hear you call Revel Pullen a marketing genius?"

"Don't you know me yet even a little bit?" said Veruschka, her face frank

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

and open. "Revel's ideas for my Pumptis were like using a beautiful sculpture for a hammer. Or like using a silk scarf to pick up dog doo."

"Too, too true," sighed Janna. "Get the forks out of your purse and let's start on those nanoPumptis."

To begin with, they grew some ordinary kilogram-plus Pumptis from Revel and Tug's fork-scrapings, each in its own little vat. Veruschka wanted to be sure they had a whopping big supply of their enemies' DNA.

For fun, Janna added OpenAnimator molecules to shade Revel's Pumpti blue and Tug's red. And then, for weirdness, Vero dumped a new biorhythm accelerator into the vats. The fat lumps began frantically kneading themselves, each of them replicating, garbage-collecting and decoding their DNA hundreds of times per second. "So perhaps these cavemen can become more highly evolved," remarked Veruschka.

By three in the morning, they'd made their first nanoPumpti. Janna handled the assembly, using the synthesizer's datagloves to control a molecular probe. She took the body of a cold virus and replaced its polyhedral head with a Universal Ribosome and a strand of hyper-evolved DNA from the Pullen Pumpti. And then she made a nanoPumpti for Tug. Veruschka used her hands-on wetware skills to quickly amplify the lone Tug and Revel nanoPumptis into respectable populations.

When the first morning sunlight slanted in the lab window it lit up two small stoppered glass vials: a blue one for Revel, a red one for Tug.

Veruschka rooted in the cornucopia of her tattered suitcase. She produced a pair of cheap-looking rings, brass things with little chrome balls on them. "These are Lucrezia Borgia rings. I bought them in a tourist stall before I left St. Petersburg." Practicing with water, Veruschka showed Janna how to siphon up a microliter though the ring's cunningly hidden perforations and how—with the crook of a finger—to make the ring squirt the liquid back out as a fine mist.

"Load your ring with Mesoglea's nanoPumptis," said Veruschka, baring her teeth in a hard grin. "I want to see you give Mesoglea his Therapy before my flight to Texas. I'll load my ring for Pullen and when I get down there, I'll take care of him."

"No, no," said Janna, stashing the vials in her purse "We don't load the rings yet. We have to dose the guys at the exact same time. Otherwise, the one will know when the other one gets it. They've been hanging together for a long time. They're like symbiotes. How soon are you and Pullen coming back from Texas anyway?"

"He says two weeks," said Veruschka, pulling a face. "I hope is less time."

And then Hoss Jenks was there with a limo to take Veruschka to the airport. Janna cleaned up the lab and stashed the vials of nanoPumptis in her office. Before she could lie down to sleep there, Tug Mesoglea arrived for his first day of work.

The first day was rough, but Tug turned out to be a pleasant man to work for. Not only did he have excellent taste in office carpeting and window treatments, but he was a whiz at industrial R&D. Under his leadership, the science of the Pumptis made great strides: improvements in the mechanism of the Universal Ribosome, in the curious sets of proteins encoded by the junk DNA, even in the looping strangeness of Ruben Gutierrez's genomic OpenAnimator graphics library. And then Tug stumbled onto the fact that the Pumptis could send and receive a certain gigahertz radio frequency. Digital I/O.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"The ascended master of R&D does not shoehorn new science into yesterday's apps," the serenely triumphant Tug told Janna. "The product is showing us what it wants to do. Forget the benighted demands of the brutish consumers: we're called to lead them to the sunlit uplands of improved design!"

So Janna pushed ahead, and under Tug's Socratic questioning, she had her breakthrough: why stop at toys? Once they'd managed to tweak and evolve a new family of forms and functions for the Pumptis, they would no longer be mere amusements, but *personal tools.* Not like Pokémons, not like Goob dolls, but truly *high-end devices*: soft uvvy phones, health monitors, skin-interfaced VR patches, holistic gene maintenance kits, cosmetic body-modifiers! Every gadget would be utterly trustworthy, being made of nothing but you!

As before, they would all but give away the pretty new Pumptis, but this time they'd have serious weight for the after market: "Pumpti Productivity Philtres" containing the molecular codes for the colors, shapes and functionalities of a half dozen killer apps. Get 'em all! While they last! New Philtres coming soon!

Veruschka's stay in Texas lasted six weeks. She phoned daily to chat with Janna. The laid-back Texan lifestyle on the legendary Pullen spread was having its own kind of seduction. Vero gave up her vodka for blue agave tequila. She surrendered her high heels for snakeskin boots. Her phone conversations became laced with native terms such as "darlin" and "sugar" as she gleefully recounted giant barbecues for politicians, distributors, the Ctenophore management, and the Pullen Drilling Company sales force.

By the time Revel and Veruschka came back to San Francisco, Magic Pumpkin had the burn-rate under firm control and was poised for true market success. But, as wage slaves, Janna and Veruschka would share not one whit of the profit. So far as Janna knew, they were still scheduled to poison their bosses.

"Do we really want to give them the Pumpti Therapy?" Janna murmured to Veruschka. They were in Janna's new living quarters, wonderfully carpentered into the space beneath the bank's high dome. It had proved easier to build in an apartment than to rent one. And Tug had been very good about the expenses.

Veruschka had a new suitcase, a classy Texas item clad in dappled calfskin with the hair still on. As usual, her bag had disgorged itself all over the room. "Mesoglea must certainly be liquidated," she said, cocking her head. Tug's voice was drifting up from the lab below, where he was showing Revel around. "He is fatuous, old, careless. He has lost all his creative fire."

"But I like Tug now," said Janna. "He taught me amazing things in the lab. He's smart."

"I hate him," said Veruschka stubbornly. "Tonight he meets the consequences of his junk DNA."

"Well, your Revel Pullen needs Pumpti Therapy even more," said Janna crossly. "He's a corrupt, lunatic bully—cram-full of huckster double-talk he doesn't even listen to himself."

"Revel and I are in harmony on many issues," allowed Veruschka. "I begin almost to like his style."

"Should—should we let them off the hook?" pleaded Janna.

Veruschka gave her a level stare. "Don't weaken. These men stole our company. We must bend them to our will. It is beyond personalities."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Oh, all right," sighed Janna, feeling doomed. "You poison Tug and I'll poison Revel. It'll be easier for us that way."

The four of them were scheduled to go out for a celebratory dinner, this time to Popo's, a chi-chi high-end gourmet establishment of Tug's choosing. Pullen's voice could now be heard echoing up from the lab, loudly wondering what was "keeping the heifers." Janna swept downstairs to distract the men while Veruschka loaded her ring. Then Veruschka held the floor while Janna went back up to her room to ready her own ring.

The two little vials of nanoPumpti sat in plain sight amidst the clutter of the women's cosmetics. They could have been perfume bottles, one red, one blue.

As Janna prepared to fill her Borgia ring, she was struck by a wild inspiration. She'd treat Revel Pullen with Tug's Pumptized DNA. Yes! This would civilize the semi-human Pullen, making him be more like Tug—instead of, horrors, even more like himself! There might be certain allergic effects—but the result for the Magic Pumpkin company would be hugely positive. To hell with the risk. No doubt the wretched Pullen would be happy with the change.

It went almost too easily. The old men guzzled enough wine with dinner to become loose and reckless. When the cappuccinos arrived, Janna and Veruschka each found a reason to reach out toward their prey. Janna adjusted Pullen's string-tie. Veruschka dabbed a stain of prawn sauce from Tug's salmon-colored lapel. Meanwhile each woman gently misted the contents of her ring onto the chocolate-dusted foam of her victim's coffee. And the old men, heavy-lidded with booze and digestion, took their medicines without a peep.

Soon after, Pullen retired to his hotel room, Tug caught a cab back to his house in the Haight, and the two women walked the few blocks back to the Magic Pumpkin headquarters, giggling with relief. Janna didn't tell Veruschka about having given Pullen the red Tug Treatment. Better to wait and see how things worked out. Better to sleep on it.

But sleep was slow in coming. Suppose Pullen swelled up horribly and died from toxic Tug effects? The Feds would find the alien DNA in him, and the law would be on Janna right away. And what if the Therapies really did improve the two old men? Risen to some cold, inhuman level of intelligence, they'd think nothing of wiping out Janna and Veruschka like ants.

Janna rubbed her cellphone nervously. Maybe she could give poor old Tug some kind of anonymous warning. But she sensed that Veruschka was still awake, over on the other side of Janna's California King bed.

Suddenly the phone rang. It was Kelso.

"Yo babe," he said airily. "I'm fresh back from sunny Mexico. The heat's off. I bought myself a new identity and an honest-to-God law license. I'm right outside, Janna. Saw you and Vero go jammin' by on Market Street just now, but I didn't want to come pushing up at you like some desperado tweaker. Let me in. Nice new logo you got on the Magic Pumpkin digs, by the way, good font choice too."

"You're a lawyer now? Well, don't think we've forgotten about that box of petty cash, you sleaze."

Kelso chuckled. "I didn't forget you either, mi vida! As for that money—hey, my new ID cost as much as what I took. Paradoxical, no? Here's another mind-bender: even though we're hot for each other, you and me have never closed the deal."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"I'm not alone," said Janna. "Veruschka's staying with me."

"For God's sake will you two at last get it over," said Veruschka, sleepily burying her head under her pillow. "Wake me up when you're done and maybe the three of us can talk business. We'll need a lawyer tomorrow."

The next morning Tug Mesoglea arrived at Magic Pumpkin and started acting—like Revel Pullen.

"Git along little dogies," he crooned, leaning over the incubator where they were keeping their dozen or so new-model Pumptis. And then he reached over and fondled Janna's butt.

Janna raced out of the lab and cornered Veruschka, who was noodling around at her desk trying to look innocent. "You gave Tug the Pullen potion, didn't you? Bitch!"

Before Veruschka could answer, the front door swung open, and in sashayed Pullen. He was dressed, unbelievably, in a caftan and striped Capri pants. "I picked these up in the hotel shop," he said, looking down at one of his spindly shanks. "Do you think it works on me, Janna? I've always admired your fashion sense."

"Double bitch!" cried Veruschka, and yanked at Janna's hair. Janna grabbed back, knocking off the red cowboy hat that Vero was sporting today.

"Don't think we haven't already seen clear through your little game," said the altered Pullen with a toss of his head. "You and your nanoPumptis. Tug and I had a long heart-to-heart talk on the phone this morning. Except we didn't use no phone. We can hear each other in our heads."

"Shit howdy!" called Tug from the lab. "Brother Revel's here. Ready to take it to the next level?"

"Lemme clear out the help," said Revel. He leaned into the guard-room and sent Hoss Jenks and his mirrorshades assistants out for a long walk. To Jenks's credit, he didn't bat an eye at Revel's new look.

"Let's not even worry about that Kelso boy up in Janna's room," said Tug. "He's still asleep." Tug gave Janna an arch look. "Don't look so surprised, we know everything. Thanks to the Pumpti Therapy you gave us. We've got, oh, a couple of million years of evolution on you now. The future of the race, that's us. Telepathy, telekinesis, teleportation, and shape-shifting, too."

"You're—you're not mad at us?" said Janna.

"We only gave the Therapy to make you better," begged Veruschka. "Don't punish us."

"I dunno about that," said Revel. "But I do know I got a powerful hankerin' for some Pumpti meat. Can you smell that stuff?"

"Sure can," sang Tug. "Intoxicating, isn't it? What a seductive perfume!"

Without another word, the two men headed for the lab's vats and incubators. Peeping warily through the open lab doors, Janna and Veruschka saw a blur of activity. The two old men were methodically devouring the stock, gobbling every Pumpti in sight.

There was no way that merely human stomachs could contain all that mass, but that wasn't slowing them down much. Their bodies were puffing up and—just as Veruschka had predicted, the eyeballs were bulging forward out of their heads. Their clothes split and dropped away from their expanding girths. When all the existing Pumptis were gone, the two giants set eagerly to work on the raw materials. And when Tug found the frozen kilograms of their own personal Pumptis, the fireworks really began.

The two great mouths chewed up the red and blue Pumpti meat, spitting,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

drooling, and passing the globs back and forth. Odd ripples began moving up and down along their bodies like ghost images of ancient flesh.

"What's that a-comin' out of your ribcage, Tuggie?" crowed Revel.

"Cootchy-coo," laughed Tug, twiddling the tendrils protruding from his side. "I'm expressing a jellyfish. My personal best. Feel around in your genome, Revel. It's all there, every species, evolved from our junk DNA right along with our super duper futuristic new bodies." He paused, watching. "Now you're keyin' it, bro. I say—are those hooves on your shoulder?"

Revel palpated the twitching growth with professional care. "I'd be reckoning that's a quagga. A prehistoric zebra-type thing. And, whoah Nellie, see this over on my other shoulder? It's an eohippus. Ancestor of the horse. The cowboys of the Pullen clan got a long relationship with horseflesh. I reckon there was some genetic bleedover when we was punchin' cattle up the Goodnight-Loving Trail; that's why growin' these ponies comes so natural to me."

"How do you like it now, ladies?" asked Tug, glancing over toward Janna and Veruschka.

"Ask them," hissed Veruschka in Janna's ear.

"No, you," whispered Janna.

Brave Vero spoke up. "My friend is wondering now if you will sign those Magic Pumpkin founder's shares back over to us? And the patents as well if you please?"

"Groink," said Revel, hunching himself over and deforming his mouth into a dinosaur-type jaw.

"Squonk," said Tug, letting his head split into a floppy bouquet of be-suckered tentacles.

"You don't need to own our business anymore," cried Janna. "Please sign it back to us."

The distorted old men whooped and embraced each other, their flesh fusing into one. The meaty mass seethed with possibilities, bubbled with the full repertoire of zoological forms—with feelers, claws, wings, antennae, snouts; with eyes of every shape and color winking on and off; with fleeting mouths that lingered only long enough to bleat, to hiss, to grumble, to whinny, screech and roar. It wasn't exactly a "no" answer.

"Kelso," shouted Janna up the stairs. "Bring the papers!"

A high, singing sound filled the air. The Pullen-Mesoglea mass sank to the floor as if melting, forming itself into a broad, glistening plate. The middle of the plate swelled like yeasty bread to form a swollen dome. The fused organism was taking on the form of—a living UFO?

"The original genetic Space Friend!" said Veruschka in awe. "It's been waiting in their junk DNA since the dawn of time!"

As Kelso clattered down the stairs, the saucer came for the three of them, far too fast to escape. Kelso, Janna, and Veruschka were absorbed into the saucer's ethereal bulk.

Everything got white, and in the whiteness, Janna saw a room, a round space expressing wonderful mathematical proto-design: a vast Vernor Panton 1960s hashish den, languidly and repeatedly melting into a Karim Rashid all-plastic lobby.

The room's primary inhabitants were idealized forms of Tug Mesoglea and Revel Pullen. The men's saucer bodies were joyous, sylphlike forms of godlike beauty.

"I say we spin off the company to these girls and their lawyer," intoned

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

the Tug avatar. "Okay by you, Revel? You and I, we're more than ready to transcend the material plane."

"There's better action where we're going," Revel agreed. "We gotta stake a claim in the subdimensions, before the yokels join the gold rush."

A pen appeared in Tug's glowing hand. "We'll shed the surly bonds of incorporation."

It didn't take them long to sign off every interest in Magic Pumpkin. And then the floor of the saucer opened up, dropping Janna, Veruschka, and Kelso onto the street. Over their awestruck heads, the saucer briefly glowed and then sped away, though not in any direction that a merely human being could specify. It was more as if the saucer shrank. Reorganized itself. Corrected. Downsized. And then it was gone from all earthly ken.

And that's how Janna Gutierrez and Veruschka Zipkinova got rich. ❍

Chat online
with your favorite authors!

Artists' Round Table **November 26 @ 9:00 P.M. EST**
Chat with Fred Gambino, Mark Garlick, Dominic Harman, and Ron Miller about their vibrant cover art.

On the Cutting Edge **December 10 @ 9:00 P.M. EST**
Geoffrey A. Landis, Wil McCarthy, and Cory Doctorow—two rocket scientists and a computer expert—discuss what it's like to work and write on SF's cutting edge.

Go to **www.scifi.com/chat** or link to the chats via our home page (**www.asimovs.com**). Chats are held in conjunction with *Analog* and the Sci-fi Channel and are moderated by *Asimov's* editor, Gardner Dozois.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Illustration by June Levine

My Night with Aphrodite

I met Aphrodite in a bar and picked her up (I asked her sign and she showed me her constellation—you know what starry nights do to women). We went back to my place and had a few drinks and went to bed. She was perfect, tongue like honey, body like love, and she said all the right things. I was done in no time (she is a goddess) but I helped finish her off.

In the morning she was still perfect. My breath tasted sour and she flinched away when I went to peck her cheek. I pissed and shaved and she watched like somebody seeing a snake eat a rat for the first time. I sucked in my stomach, brushed my hair, took a shower.

She followed me to the kitchen and didn't want breakfast. She gagged at the smell of frying sausage. She was still naked. Her breasts defied gravity. I was hungover and felt like dogshit on a boot heel. I noticed that her feet didn't touch the floor. She suggested that I could be a better housekeeper, wrinkling her pretty nose at the dishes in my sink.

I walked her to the door. She didn't want a ride. My car, she said, smelled like cigarettes and fast food. She would fly. "You can call me if you want," she said doubtfully. "Just light a white candle, scented with rose and jasmine, and invoke my name five—"

"Sure," I said, and closed the door.

—Tim Pratt

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

PICK MY BONES WITH WHISPERS

Sally McBride

Sally McBride lives in Toronto with her writer/artist husband Dale Sproule. Her short fiction has appeared in *F&SF, Realms of Fantasy, Tesseracts, On Spec, Northern Frights*, and other magazines and anthologies. She's currently working on a few books—one science fiction, one contemporary dark fantasy, and a collaborative fantasy novel with her husband. This is Ms. McBride's second story to appear in *Asimov's*. The first was "The Fragrance of Orchids" (May 1994).

Fritz licked the side of my face and let out a little whine. I brushed him away; I'd managed to solidify a magnified view of an angel-wing larva opening in the packed wet mosaic of sand sixty centimeters down, and was waiting for it to start digging for the surface. It was hard enough concentrating through the sun and heat of the beach without a wolf in my head too. He licked me again and said, "Lizbeth. We have to go."

"Fritz, shut up! It's nowhere near dinnertime."

Fritz's furry brindled muzzle shrank and became the pale, sharp-nosed, grey-eyed face of my mother. "Lizbeth, it's me. I want you home *now*."

I shut off the microscope, waited for it to withdraw its burrowing proboscis, coiled it into a loop, and hung it on the belt that was all I wore. "Mother," I said, "wasn't it you who sent me out here in the first place? Don't you *want* samples from the lily-tree grove?"

"You're nowhere near the lily-trees." Her voice sounded tense, which was unusual for her. "You're at the beach, though you were told not to go there."

I shuffled my toes deeper into the warm sand and hunkered down, hugging my knees. "So what if I am? I'll get to the lily-trees—"

"Forget them." Her eyes became intensely silver as she looked at me. It's hard to describe in words how it is when a net person is there, *in* you, talking to you. Looking into your eyes from inside your own skull. I guess I'm

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

used to it; it doesn't really bother me, except when Mother uses tricks of physical and psychological coercion to get me to behave.

"I want you to face south, look toward the ocean and tell me what you see."

"Toward the *water?*"

"Yes. Scan the whole beach, magnify if you need to."

I stood up, brushed sand off my legs, and squinted down the long dry slope of yellow sand to the shadow that lay black and thick under the dike wall, about two kilometers away. From here, the huge wall of compacted mud didn't look like much. It swooped up into the distance to the south, like the edge of a mesa, at the top of which was an ocean. I squinted, bringing the hazy vista closer as my optic implants responded to the cue.

"Look at the base of it, Liz. Tell me what you see."

"I can see something—uh, looks sort of glittery, something moving in the shadow—Oh!" I fell back a step in surprise.

"*Tell me what you see,*" said Mother's voice harshly.

"It looks just like sappers. Giant ones, absolutely swarming up and down the dike. Must be hundreds of 'em."

Mother sent a tactile burst that took me by the scruff of the neck and turned me toward the camp.

"Move," she yelled, vanishing from my head. Fritz popped back in and took over, nipping at my ankles and yowling as I ran up the beach that bordered this world's ocean, an ocean held back from the flatlands below it by the universe's biggest berm.

It's hard to run through sand; I was gasping by the time I reached the edge of the vegetation. Stopping in a meager patch of shade, I looked back. The terrain was wide, sandy and sunny, and we called it a beach, but it was nowhere near the water. The water was kilometers away and high overhead. Suddenly I felt like an ant at the bottom of a crumbling dam.

Fritz bounced around in my head, panting. "Let's go-o-ooow!" It turned into a howl. Mother must have pushed the panic button.

Fritz was my monitor, my tutor, my medic-alert, my pal; but mostly he was the personified link embedded in my brain that hooked me into the net, where everything happened. Everything that wasn't physical, that is. For instance, my lungs were gasping for real air, and my body was covered in real sweat. Real sand, gritty and annoying, stuck between my fingers and toes. I was the only human being for hundreds of square kilometers.

Fritz opened his phantom mouth and bit me on the right buttock, hard.

I ran toward camp.

As I ran, I heard whispering in my head, some kind of code string that I probably wasn't meant to overhear, and then there was a burst of static in my visual field. I almost fell.

"You all right?" someone puffed in my ear, and as I scrambled up an incline on hands and knees, the someone resolved into Daddy. He was running alongside me, wiping his forehead comically. I didn't laugh.

"Where's Mom?"

"Operating a shuttle. Don't worry, we're going to pick you up, Lizzie, before—"—*Before the water gets you.* A battering flood of sensory detail hit me from him, before he could suppress it—what his horrified imagination pictured happening to me. *A black torrent, alive with alien animals, their limbs ripping her flesh—*

And then he was back in control, barely. "Just keep running, baby, everything's going to be all right."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Okay. A shuttle's coming down from the orbital swarm, it'll take me up, safe—

"Stay with me when I get there, okay? Tell me what's happening?"

"Sure, Lizzie."

Daddy was new in the Fulnet. He'd married Mother when they were both fifteen, two years past legal age. They'd had me, and she'd opted in right away. He'd stayed out, remarried after a few years but had no other children, and then, when that marriage fizzled too (I'd never liked Sandra), opted to Fulnet when I was ten. He'd been one of the few flesh-and-blood people I've ever actually known, at least for so long. Others come and go, mostly other children. I'd never met anyone older than Daddy who was still out and about in the physical world.

I could still remember the physical *feel* of him, his smell, the way his eyes got bloodshot when he'd been up all night listening to old music or whatever he did when he got all pissed and lonely. Virtual eyes never get bloodshot, unless you're going for an effect, and Daddy wasn't the type to go for effect.

But Mother was. Suddenly she was there beside us, loping along easily in the form of a wolf much like Fritz, but pure white. Her silver eyes flashed at me. Fritz's eyes were blue, and he was not white, dammit, he was golden brown with grey bristly whiskers over his eyes, like eyebrows. Why did Mother keep showing herself as a wolf? Why did she butt in on Fritz and take him over when she wanted my attention? She knew it was something I hated. Fritz was there, running beside me too, but she'd suppressed his voice.

To hell with it.

To hell with insane parents and their machinations.

Mother and Daddy conferred for a second, shutting me out. I had to stop for a moment and catch my breath. Fritz thrust his nose into the palm of my right hand, his virtual muzzle soft and moist. I loved it when he did that. He'd be talking to me now if she'd let him. I understand that real wolves never had the power of speech, and were hard to tame and control. In this way, Fritz was better than a real wolf.

Though I'm twelve, there's still a lot I can't do in the children's Net areas, even though Fritz was letting me in deeper and deeper all the time. There were dark places I could never go, forbidden subjects I could never get data on, tantalizing things I couldn't see or join or do. Sometimes it was frustrating, and often it was humiliating, to be a flesh-and-blood person.

But. I was alive, wasn't I? Wasn't that the way people were *supposed* to be? And wolves?

Oh, never mind. I've talked to therapists and assured them that I forgive Mother and Daddy for doing what everyone does eventually anyway. Apparently, you can lie to a Fulnet therapist and have them buy it, if you're clever, and I am.

Mom let the wolf-body vanish—no doubt to assign processing to other more pressing concerns—and simply talked. I kind of liked the way her voice was always the same, even though her image changed.

"Lizbeth, don't worry. The shuttle will be there soon to lift you off. And the equipment too, if it can be managed."

I started running again. "Will somebody *please* tell me what's going on? If it's not too much *bother*?"

Another quick burst of communication between Daddy and Mother, but no answers for me.

I was almost back at camp, which consisted of a lot of automatic equip-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ment busily working, a spin station and auxiliary power font, a habitat for little me, and assorted water distillers, antennas, pumps, homing grids, etcetera. Connecting me to all this, and to the local com node, were a battery below my right lung, a processor in my skull, and a sensory/antenna web under quite a lot of my skin.

Sometimes I could feel it all there inside me. Living metal, like parasite vines nudging against my pink squirming organs, especially when it was dark, especially when I lay out under the stars and stared up and up. Imagining what awaited me, out there.

We—people both real and net—live in a swarm of habitats and computer blocks currently in orbit around the sappers' planet. Other groups elsewhere are connected, somewhat unreliably, by a data-flow that uses something called half-spin tangled pairs; in this case, multiple electron pairs. When the swarm itself moves, it moves at relativistic speed. Time passes strangely for all of us, alive or not.

The Earth, where humans and wolves and all the other Terrestrial species evolved, is long behind us. How long?

Who cares? Not me.

Virtual people don't give a damn what time it is.

I'd asked Daddy once why people bothered to stay alive long enough to have children. Why didn't *everyone* simply live in the net? I pointed out that all it would take is one generation of that, and everyone would *be* Net. This was before he went in, when he was still flesh, and I think I really stumped him. He ended up saying something like, Beats the hell out of me.

Then, realizing how this must have sounded, he'd hugged me briefly, hard, and said, "The universe thrives on change. What better way than the random mingling of genetic material?" Then he got drunk, as I recall.

The next morning, I found him asleep on the floor beside the couch in our quarters, and the day after that, he opted in. He'd just turned twenty-six, and I was ten.

Sometimes I feel awfully alone, despite all the people in my head.

"It's the dike," he said finally, as we skidded down the last sandy hillock. At last, some information. "The embankment that holds back the ocean along this coast. It was built by giant versions of the arthropod-like critters you see all around here, but these ones are engineering geniuses, considering that they're not actually intelligent. They're a sort of hive mentality driven to do what they do by instinct."

"The ones I saw under the dike, the big sappers . . . they must have been the size of a shuttle. What were *they* doing?"

Mother had come up with this name for the industrious animals, which spent most of their time digging in the sandy soil of this planet and minding their own business. Fritz, in his eager, drooling librarian mode, had fetched me the fact that Terran engineers were once called sappers; the name fit these earnest, bug-like construction workers perfectly. Up until now, the ones I'd seen ranged in size from the length of my thumb to the bulk of a healthy watermelon.

Daddy paused, and I knew it wasn't a processing pause, it was actually him dealing with telling me something he didn't want to say, and I didn't want to hear. "It seems that a catastrophic flood is what the sappers need for their reproductive cycle. They build the dike to hold back the ocean—we deduce it takes about fifty years—then they all get together and undermine it so the water rushes in and floods the entire lowland hereabouts."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"So the ones I saw in the shadow of the dike, they were digging it up. Trying to cause a flood."

"Yep. Those particular ones are doomed, by the way. They aren't built to walk on land. Their exoskeletons will collapse and their internal organs won't function. They're sacrificing themselves for their race, along with thousands more of them on the ocean side."

"But, how . . . *why* do they do it? It doesn't make sense."

"It does to them. Reproduction, remember? Just like us. Also, they have patience. And this world's lower gravity and eccentric tidal forces help them—there's a fifty year correlation with the planet's orbit."

"And you only figured this out *now*? What's the idea sending me down here if all this was going to happen?"

"We didn't think it would, not for another several months."

"What about the other kids?" Six of us were on this field trip, scattered around a large area, four boys and one other girl.

"They're okay. They're in the highlands."

"So who screwed up?" I asked belligerently.

"Some of the monitors we had in the ocean failed. They drifted off their marks, but happened to get into a position relative to the others that generated an intersecting signal, and it fooled us into thinking that there was hardly any activity along the dike. A fly-by picked it up just about twenty minutes ago, and we've been scrambling ever since."

"Huh." I couldn't help looking up into the sky in search of a descending shuttle. Nothing.

And then I felt something cold nudge my leg, and the rough warmth of Fritz's furry shoulder. Though I'd never touched a real wolf, or even a dog, I knew that this was the right way for one to feel. He leaned against my knees heavily. A comforting surge of nostalgia went through me, hard to identify; then I figured that it must be the way that Fritz was doing body-interaction stuff like he used to when I was very young. He'd been a puppy then. I realized that his behavior was most likely a response to my fear, which of course he knew about before I did.

And I'd thought I was being so big and brave and sassy.

It was a sort of tradition that no one but you could hear the voice of your animal friend, and most particularly that your parents couldn't. Fritz was mine alone—no one else had a friend like him, and no one else knew me and loved me the way he did. It had been rude of Mother to take Fritz over like she had on the beach. Though everyone above a certain age knew what their friend *really* was and how it was just another aspect of the Net, still, it was a charade that most people kept up. Except, of course, Mother.

All it really amounted to was that the program running Fritz was focused totally on me, more interested and attentive than any parent could ever be.

"Come on, you sloth," he yelped. "You furless slug! I'll race you!" Fritz bounded around me and headed into camp at a lope, tail wagging high as a flag.

When I was little, I used to look for his paw prints, and tried stubbornly to find hairs shed from his coat. His laughter when he watched me do it seemed so real, I felt that he *must* exist outside of my own head—somewhere.

I ran after him, over the last little ridge and down the path that my own footsteps had beaten among the scrubby grasses and rubbery little plants clinging to the packed-silt soil. Everything was the color of biscuits, with

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

here and there a patch of celery-green or cheesy-yellow. A big, boring snack tray of a planet, with seafood *hors-d'oeuvre* on the way.

Maybe I'd have time to grab some of the things I'd collected during my month here—little round shells; strings of desiccated bark I'd made that I liked for the way they rattled and twirled in the breeze; my matched sets of molted sapper-claws.

I'd tried to turn some tiny sappers into pets, corralling them in pens of twigs and piled dirt, but all they did was dig and shovel with their armored snouts, their legs churning. They rolled the twigs aside and trundled their way out as relentlessly as robots. In fact, they were stupefyingly boring, and I mostly ignored them.

"Fritz! What's happening now? Is the dike still there?"

"You'd know if it wasn't. You'd hear it. They think it'll last a while longer."

"They *think*?" I rolled my eyes. "Can I have something to drink? A Coke?"

"Sure, why not. Be ready to hop when the shuttle lands."

One of the things parents could do, through their connection to all things electronic, was lock out certain substances—junk food in the fridge, for instance—and influences they deemed inappropriate for their tender offspring. A pain, really, but I knew I'd do the same for my kids when I had 'em. I planned to have four children as close together as possible, so they could be friends. I know what kids can get up to, if given half a chance. Which made me think: Were chances programmed in? Was it a psychological plus to let a kid get away with the odd thing?

I pondered this, drinking my soda and eavesdropping as much as I could. Mother and Daddy were being tighter than I'd ever seen them, their heads together (virtually speaking). They weren't letting much leak through to me.

"Fritz, show me a view of the dike, okay?" There should be several ways he could link in to something monitoring the area; after all, it was the focus of interest hereabouts. But he shook his head and tucked his nose between his paws, looking at me with those ice-blue eyes of his. "Stupid mutt," I said. He wagged his tail and blinked knowingly. "Come on! I have a right to see it!"

"Granted. But I'm not going to let you, not right now." His ears kept pricking up and then lying back on his head, as if he was listening to something that hurt them. What did it mean?

"Then tell me what Mother and Dad are up to."

"Your mother's trying to program a viable entry corridor for the only shuttle close enough to reach this base."

"Oh." The soda can was cold and slippery in my hands.

He smiled doggishly and let his big pink tongue loll. "You asked."

I wished I could throw something at him. I hurled the can at the habitat wall instead, ran outside and looked up fruitlessly. "What's Daddy doing?"

"Never mind," said Fritz, following me. "He's busy, he can't talk to you now."

I was almost old enough to have a real baby of my own, and even *Fritz* was treating me like a kid! I felt like crying. In fact, I *was* crying. My stupid nose needed blowing, so I wiped it on my arm. I ran back inside and began throwing things into a heap on the floor, stuff I wanted to keep. Fritz helped, uploading some of the recent data I'd gathered.

I was digging in a box for a shell bracelet when Fritz suddenly bristled. His hackles rose, and he snarled ferociously at nothing. "It's coming," he

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

barked. Then he howled briefly, his way of indicating that he was handling a lot of data at once. Then I started to hear far-off thunder. The air felt different. Tighter. It felt like the skin of a drum that someone had just pounded.

I froze in place, my knees weak. "Where's the shuttle? Shouldn't it be here by now? Fritz!"

The thunder kept coming, a deep rolling boom that didn't stop. Should I run outside? But what if I saw the water coming? How long would it take to get here, anyway? "Fritz! How long—"

Mother popped in. "The shuttle's on the way. It's taking a bit longer than we'd thought." Her voice was incapable of sounding tense, but that was nothing special. She had probably been manufactured, not born, and then grown into the sort of woman who abandons her own body as soon as legally possible.

"What should I do?"

"It's okay, Lizbeth," she said, her face fading in and out. "It's going to be all right, just—oh, shit. No!" Static, then a burst of raw data in a buzzing scream that cut off after a split-second of pain. And then Daddy was there.

My teeth had started to chatter. I was alone on this fucking planet, and all I had to save me were some screw-up electronic constructs that weren't even human any more.

Fritz pushed me into the chair in front of the com-link controls. Daddy said, "Sit here, do as I say, and do it fast."

"But, what—"

"Shut up! See that green cable coming out from behind the comset? Pull the end closest to you out of that silvery box with the studs all over it. Don't touch the prongs!"

"Okay, it's out." It glittered in my hands as the tiny motile wires inside the guard prongs groped for a connection.

"Reach into your hair, find your junction and pull out the shield. Done it? Now push in the cable. Push!"

My fingers shook. I closed my eyes, groping with the connector until it lined up with the junction I'd had in my skull since before I could remember. I'd met Fritz this way, when he'd been integrated into my psyche.

"But—"

"*Do* it!"

What choice did I have? My eyes were streaming tears, and the roaring in my head might have been the oncoming water or it might have been my life being crushed by this little green wire.

"No!" I shouted. "I'm not ready!" But all the same I pushed it in. Die one way or die another, this was it.

At least Mother had tried to bring the shuttle in. How *dare* Daddy do this to me?

What choice did either of us have?

There was no room for anger after the connection was made. No room for fear or hope or hatred. My existence split into two halves: *Then. Now.*

Then was gone forever, locked in a body that was being ground to pulp under tons of water and mud and alien engineers.

Now had no duration, but would go on forever.

Everything I'd ever thought or known or imagined was wiped out, as if by the casual sweep of a wet rag in the hand of a giant; as if by the wag of a big dog's tail knocking a crystal vase to the floor to shatter. The shards flew in

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

all directions—there is no gravity in e-space—flew and glittered and took every little bit of me and sent it spinning.

Each shard held a glimpse of my life, exploding away and becoming huge; or rather filling a huge volume of solipsistic space (and I knew that word without having to think about it; I knew so much—and saw spinning shards of other lives around me, on and on . . .). Expanding, blossoming, growing. . . . It was like becoming a god without having the slightest knowledge of what a god should be.

And as I expanded, I wondered: How had father resisted for so *long?* How had he justified clinging to his grubby little physical life? Had he done it for me?

One of the shards spinning by caught my attention. I looked closer, and saw my own death.

I saw it as if I were floating above the action, saw the swirling muck, the thrashing limbs of countless sappers as life-renewing water surged and foamed across the desiccated land. The view was being fed to me from one of the remotes set to record the event. A simple miracle, easily explained: my god-like brain had reached out for what it wanted and the view had appeared. I shut my eyes.

What did *that* mean? I had no eyes to shut. But the water and the roiling clouds of filthy spray all vanished and were replaced with a vibrant blackness in which I could feel myself being jerked back and forth, up and down, around and around, until, in self-defense, I somehow drew my "body" together into one pseudo-solid entity.

Thus I huddled, spinning helplessly in the dark.

Then I heard a sound. A tiny, far-off sound, hollow and echoing. Fritz! It was Fritz barking, and my heart—or whatever was its analog—leapt. But the barking seemed to deteriorate. It fractured into smaller and smaller scraps and fled from my perception like torn feathers on the wind.

"Fritz! Fritzie!" I called, before taking time to think about it, or wonder how a disembodied mind could shout. The barking faded. "No! Fritz—I'm here!"

He was gone.

At that moment I felt so utterly helpless and alone that I wished I had died completely in that flood.

When I opened my eyes at last, Mother and Daddy were there, hovering, wearing expressions of worry and fear. For a moment, I thought that I was four years old again, and would find the wolf cub wagging and eager in my head.

But that was wrong. I was Fulnet now. All grown up.

And Fritz was gone.

I seemed to be on a bed, in a busily humming room full of nice normal sounds—monitors beeping, distant voices chatting, the rhythmic shushing of air circulating gently.

I felt as if a lot of people had rummaged in my brain and, before closing the top of my skull, had arranged everything they found there into a more logical order. But in doing this, they hadn't bothered to check whether they'd broken or lost anything.

Daddy stepped up to me, holding out his arms ready to hug me, but I turned away. His arms fell back to his sides and I felt a jolt of rueful, loving sorrow. He'd sent it right to me, the bastard.

Mother stood with her arms crossed, just as cool and collected as she'd al-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ways been . . . except now, she was not just a construct in my brain, she was absolutely real. As real as anything would ever be again. Which is to say, more real than the truth.

"So this is it," I said.

Mother smiled slightly. "Yes, it is. Welcome to grown-up land."

"Thanks. So . . . so when does the p-party start?" My pathetic attempt at flippancy deteriorated into what felt ominously like a crying jag. My breath came in gasps, I felt hot, and, by God, I felt my nose start to run. It was incredible. Then suddenly I felt like laughing. In fact, hysterical hoots of mirth welled up in me, just as frightening as the crying had been.

"What's happening? Why am I doing this?"

Mother sat on the edge of my bed. I felt it give a little with her "weight."

"It's just feedback," she said. "It'll go away after a period of adjustment. The system is getting to know you, and it didn't have the usual lead time. Circumstances were . . . strange."

"I'll say." I gulped, feeling my chest heave. Prickles ran up and down my legs and arms, and suddenly I was freezing cold.

"Give it time. You'll see—it's not so bad." She glanced over at Daddy, who was still standing there all forlorn and hangdog. I wasn't ready to acknowledge him yet, even though he'd worked some sort of miracle getting me connected through whatever hastily cobbled-up route he'd jammed together. I hadn't known he had it in him.

But he'd still taken my life away—my *real* life, the one where I was going to have kids of my very own and not Fulnet until I was thirty and they were all grown up. Silly me, I'd had it all planned out. I'd even picked the boy I was going to marry, though I hadn't let him know yet, fortunately. How embarrassing to have to explain that I'd got my body killed.

When I thought I could hold my voice steady, I said, "Does anyone know what happened to Fritz?"

They looked at each other. They were doing it again, damn it—talking behind my back. *Still* treating me like a kid!

I swung my legs off the bed and stood up. Looking down, I noticed that my feet weren't touching the floor. As soon as this registered, the floor came up to meet them, which I thought was pretty good.

"Fritz . . ." Daddy ran a hand over his face. "I couldn't get Fritz as well as you, baby," he said, his voice husky with emotion. Effect, I reminded myself; it's all for effect. "His construct resided so thoroughly in your material brain that he couldn't be saved. Each analog pet adapts so well to its owner that it becomes a unique entity and takes up a lot of room. The assigned protocols governing the Fritz interface at this end just weren't up to the job in the time I had. I'm very sorry." He sounded as if he meant it.

I tried calling Fritz, squeezing my eyes shut and making believe that my ears were the size of radio-telescope dishes, able to hear a pin drop clear across the galaxy. I called him for what might have been a very long time, or possibly a small fraction of a second.

But my Net ears could hear nothing but a hollow roar, the kind that comes from inside of an empty seashell, and I knew that Fritz was gone. Whatever there had been inside my brain that made him my friend had been pounded into an ingredient in the thin organic soup that had deleted the campsite. He had died, and I hadn't.

A little part of my brain got an idea then, and set its vast new speed toward carrying it out. The main part of me walked out the door of the white

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

room, leaving Daddy and Mother behind. I didn't want to see either of them ever again.

Time went by. Nobody seemed to mind that I was doing nothing useful. A mopey, depressed computer program; now that's charming.

I learned things, though. Like that there really *is* no reason for children to be born, or for anyone to cling to physical life. There's no death, after all. Except for constructs like Fritz. But genes are stupid, and stubborn, and single-minded. Reproduce! Mingle! *Evolve*. No matter where we travel, we'll still have that imperative in our souls. We're just as stupid as the goddamned sappers.

The loss of my body and its unique genetic information measurably lessened the ultimate richness and longevity of our portable Net civilization.

And I don't care.

I wanted Fritz, the way he'd lean against me all furry and warm, and talk to me, saying things that Daddy would have said if he'd been able.

Eventually, I joined a team studying the world that my body had died on, and made plans to return to it in another fifty years to watch the next flood. Or in a hundred, or a hundred and fifty. We keep ourselves busy.

I found myself working pretty closely with Mother. Surprisingly, we get along okay. Her way of thinking is pretty close to my own, as it turns out. And Daddy? Well, I couldn't stay mad at him forever, could I? He's still hurting.

When the time seemed right, I accessed that little part of my brain that had set itself to gathering scraps of memory, tracking them like paw-prints in sand, finding and picking up the shed hairs that were all the little things I remembered about Fritz.

Then I put them all together and downloaded a wolf cub.

His name isn't Fritz. He looks a lot like him as he pads around beside me, though. People are used to seeing us together.

But he's his own wolf, so to speak; smart, sarcastic, loving and drooly.

Fritz would be proud. ❍

POOR RICHARD'S ANALOGUE

(for Howard Waldrop)

Mister Franklin of Philadelphia
raised capital for several of his
wonderful inventions by writing such
popular ha'penny editions as
"Thomas Swifte and His Phlogiston-Engine,"
but used a *nom de plume* and, thus, never
received credit, or blame, for inventing
science fiction. This is the truth, somewhere.

—Steven Utley

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

REJECTION

Robert Reed

"Rejection" views "first-contact as dating; as courtship; as a promise of great, but always vague rewards; and as the omnipresent threat of heart-wrenching loss."

May 2011

Michael never forgot how his mother cried.

Really, the alien ship wasn't that neat. It looked practically tiny, even when people said it was bigger than the Moon, and it didn't seem all that fast—a speck of light growing only a little brighter each night. But for days and days, the adults couldn't talk about anything else. The aliens were broadcasting, they said. They said the aliens were from the galactic union, whatever that was, and this was going to be the biggest thing in history. The aliens had come to offer people a membership in their union. Whatever that meant. But Michael's mother believed every good story. She was a dreamy sad woman full of enthusiasms. Sitting down with her son, she promised, "Everything is going to change now. Aliens will be visiting us all the time, and we'll build our own starships and travel far away. We're going to learn wonderful new things, sweetie. Everybody's life is going to get so much better. Longer and healthier and better. You can't imagine all the good things that will happen. Nobody can."

Michael imagined a new Game Boy. He imagined himself throwing the ball all the way from right field to first base. And then, giving his mind free rein, he pictured himself hitting the game-winning home run.

"Isn't it a beautiful ship?" his mother asked.

They were watching the newest pictures on their old television. What Michael saw was a smear of light that couldn't decide what color to be.

"It's made of plasma," she explained, believing the word would mean something to him. "I know it's almost as big as a planet, but the ship doesn't weigh that much. It's like a bubble of bright golden air. Really, it's like a breath coming straight from God."

That was a very weird way to think, Michael decided.

Then Mother gave him a hard, level look. This was the look she used when it was time to visit his grandparents, or sit through church, or when a new boyfriend was going to stay the night.

Michael braced himself.

"The aliens want to speak to us," Mother explained. "They're going to interview each of us. Alone."

The boy nodded, saying, "Okay."

"It's just a formality," she assured. "This is something everybody does be-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

fore they become full members." Mother never smiled much, but she was smiling then. She looked very pretty and young, grinning at the golden smear on the television, her hands jumping around in her lap. "The interviews won't be hard, and they won't last long. But everyone has to do them. Do you understand, Michael? These are the rules."

"Okay," he said. He understood the importance of rules.

"Be brave," was her advice. Then she set her hands on her knees, and she shivered, her eyes huge and staring at nothing. "Be honest," she was saying. "But try and make a good impression, Michael. This is important."

"I'll try," he promised, speaking with confidence. Then he took a deep breath before asking, "Will the aliens give me a Game Boy? If I'm really, really good?"

The starship looked big only during the last few hours. But the sun was still up, and all Michael could see with his own eyes was a dull patch of silver light hanging in the eastern sky. This was going to be the big day. He and Mom were visiting her parents. He was playing outside. "Stay close," his mother had warned. "And please, be good." He was trying to be good. Sitting on the driveway, Michael was using a stick and his thumbs to crush ants. He wasn't bothering anyone when Mom threw open the front door, shouting, "Get in the house now! Hurry, hurry!"

He never made it. He tried, but the starship had accelerated without warning, suddenly leaping all the way from the Moon's orbit to the Earth. It took just a few seconds. And it became even bigger, swallowing up their little world. But the ship didn't weigh much, just like they were promised. The impact was soft as a breeze against skin, and then it was finished. Suddenly Michael found himself standing inside a big silvery room. He was alone. There was a bright silvery chair in the middle, but he didn't sit. He didn't feel like sitting. The old stick was still in his hand, ant goo clinging to the tip. Should he throw the stick away? He started to hunt for a wastebasket. That's what he was doing when the aliens appeared.

"Hello," they said.

Michael turned toward the voices. The aliens were standing at the far end of the room. They looked like old men and women. Then they looked like aliens, their faces weird and stuck in weird places. And then they turned into glowing clouds, their voices coming from inside.

The boy laughed, sort of.

"Hello, Michael," they called out.

He dropped his stick and said, "Hi."

"May we ask you some questions, Michael?"

"I guess."

"What are we, Michael?"

Didn't they know? Suspecting a trick, the boy leaped for the easy answer. "You're aliens. You come from some big old star."

"We come from many places," the aliens cautioned. "Many worlds orbiting many suns are our birthplaces. We represent a confederation of highly advanced societies. And as your mother has told you, we are here to see if your species should be admitted into the galactic union."

The boy nodded, and waited.

"Would you like to be our friend, Michael?"

Right away, he said, "Yes."

Then they asked him, "Why?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Again, as quickly as possible, the boy explained. "Because if we weren't friends, we'd have to be enemies."

"Is that so?" the voices asked.

With a conviction based on hard experience, Michael said, "Sure."

"And what would happen, Michael? If we were enemies—?"

"We'd fight," he reported. What could be more obvious? "Enemies always fight each other."

Then he was standing on the driveway again. The silver room and aliens had vanished. Mom was still standing in the front door, staring out at the yard, nothing there to see but Grandpa's fresh-mowed grass. Then she turned and hurried back inside, and Michael looked at the sky. There was no ship to see. The sun had fallen a long ways, and the air had grown cooler, smelling like nightfall.

Michael found his trusted stick and returned to the driveway, searching for prosperous ant nests.

Then he heard his mother wailing.

He crept to the front door, and with a practiced wariness, he peeked inside. Mom was sitting on the sofa, weeping. Grandma was beside her, looking puzzled about something. Grandpa was in his chair, and he was nothing but angry. On the television, someone was talking about an application being turned down . . . humanity was found unworthy of the honor . . . and like she did whenever a boyfriend left her, Mother sobbed and made fists and shook them at nothing. . . .

Only this was worse than when boyfriends left.

Michael could tell. Just watching, he knew this was going to be much, much worse.

October 2021

The chemistry professor opened the lab on Saturday morning, giving his slowest students this one opportunity to catch up. Michael had been struggling with his apparatus all week, trying to harvest enough of the properly doped buckyballs and earn a passing grade. It was a miserable morning. His hangover just seemed like the topper. He was sitting on a high stool, his balance uneasy, his vision blurring at the worst possible moments. Suddenly the professor returned from his office—a bearded and relentlessly disheveled man who was running for some reason—and with a wide grin, he made the simple declaration:

"They're back!"

Only Michael remained on the stool. He might not harvest another ten buckyballs, but at least he didn't bolt with the others. He didn't rush back to his dorm room or the student union, watching events that were happening halfway across the solar system. He even managed to convince himself that he enjoyed his sudden solitude. At least twice, he caught himself singing. Once, he heard himself chatting with his dead mother.

By contrast, his girlfriend was made of weaker stuff.

"This time," Jackie said. And that's all she needed to say. Everyone knew what the two words meant. Again and again, with a firm conviction, she would say, "This time," and look across the restaurant table, smiling at him.

Michael could have said, "Sure."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Or better, he should have told her, "I don't want to talk about it."

But instead, he ignored her. Or he tried to ignore her. He ate as if he were hungry, and when they were finished with dinner and heading back to her room, he spoke carefully about everything but the aliens.

Maybe she noticed.

More likely, she didn't. Really, she wasn't the sharpest soul. Michael was beginning to appreciate that. The sex was good, but only good, and whenever he bothered to look at the two of them, he saw nothing but trouble looming.

Unaware of the perils, the girl steered back toward the only real topic of the night. "We've made so many changes in the world," she exclaimed. "Improvements everywhere. Life on Earth, and above, is so much better now. And in just ten years, too."

He didn't respond.

Jackie mistook silence for agreement. "I'm sure they'll be impressed. They've got to be. Poverty rates are what? Half what they were? And there isn't nearly as much disease. And what's the literacy rate now? Around the world, I mean."

"I don't know."

"In so many categories, we're doing better." She couldn't stop praising humanity. Obviously she was practicing for the next interview. "When was the last time we had a war?"

"South Africa," he mentioned.

"But that's a civil war. I don't think that counts." With a forced sincerity, she said, "We're more peaceful now. A good, law-abiding species."

"Is that what they want?"

Michael was sitting in the driver's seat—a traditional gesture in a world where electric cars glided along with computers at the helm. He'd asked that simple question without considering the consequences, and when it was met with silence, he thought, "Screw the consequences."

Facing Jackie, he asked, "What do they want us to be? Do you know? Can you explain it to me?"

She was astonished.

He reminded her, and himself, "They rejected our first application. No explanations. Just a bland little, 'Thank you,' and some noise about future opportunities."

"Which is now," she replied.

No, she wasn't stupid. But she was simple and she was silly. That's what Michael decided, staring at her with a mixture of rage and pity.

She was appalled. "Ten years," she repeated, "and look at the changes we've accomplished. The world's a better place. We've got bigger rockets, and there's a lot less hunger, and the gap between rich and poor is starting to shrink—"

"Is that what it takes?" he asked.

"Excuse me?"

"Is that what these assholes want? Centralizing governments mandating fairness and decency?" He shook his head, asking, "Why does everyone assume that? That the bastards—"

"Michael!"

"That the bastards have any politics. Why does that make sense?"

She had never asked that simple question. Facing it now, she could only sob and shake her head, finally wringing loose a few sorry words meant to

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

warn him. "I guess I don't know you," she muttered. "Not like I thought I did."

"Yeah, well."

She started to cry, quietly and bitterly.

He said, "Shit."

Looking straight ahead, he said, "Bullshit."

At enormous expense, cities had reduced light pollution to a trickle; how could you join the galaxy if you couldn't see it? A person sitting inside a robotic car could look into the sky, catching his first glimpse of the great starship. Like the last ship, it was plunging toward the Earth. But it looked different in small ways, and it had originated from another part of the sky. There was no evidence that it was the same ship as before. Really, even the simplest answers were beyond the clumsy reach of humanity.

Michael stared up at the smear of light, and with frustration as well as a massive inevitability, he told Jackie, "I think we should break up. See other people. That sort of thing."

She said nothing.

Michael glanced at her. She wasn't crying, but her eyes were closed and her mouth was trembling. Instantly, he regretted his outburst. But when she didn't react, he grew impatient, saying again, "We should break up."

"I heard you the first time."

"This isn't going to work," he explained.

"Shut up," she told him.

"Why do you have to be so awful?" she asked him.

Then to herself, with a quiet and furious voice, she said, "I'm so stupid. I should have known. . . !"

The impact was very much the same. Again, the starship picked up velocity as it crossed the Moon's orbit, and it merged with the Earth and every orbital platform. The human species met a nebulous panel of alien species. On average, interviews lasted for eight apparent minutes. Yet many were much briefer, while a few seemed to last for hours. Once again, Michael found himself inside a small room. But this time the walls were green and there was an enormous soft pillow in place of the chair. Again, he didn't sit. He gave the pillow a kick and then stood with his feet apart, listening to a half dozen questions being delivered with a smooth American English.

"How are you, Michael?"

"What do you think of us?"

"What do you expect from us?"

"Do you have anything to say?"

"Why are you silent, Michael?"

"Why do you cry, Michael? Please, tell us that much."

August 2039

"Evelyn placed your name on our master list. I'm assuming she knew you years ago. In graduate school, was it?"

Michael said, "Sure."

Then he asked, "How is Evelyn?"

"Extraordinarily busy. She would have preferred to meet with you herself,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

but what with our timetable and several thousand test subjects to prepare during the next six and a half days—"

"What exactly is this project?"

The technician was a harried little man armed with electronic forms and a briefcase jammed full of tiny wonders. He paused for an instant, the question seeping into his exhausted mind. Then with a confused shake of the head, he said, "Sorry. I thought you'd given permission. This would have been five years ago, just after we received funding." He stared off in a random direction, accessing buried files or his own uncertain memory. Finally, with a measure of certainty, he said, "Yes. You consented to take part, when and if the opportunity arose."

"You want me to wear a wire," Michael said, smiling warily. "Yeah, I remember. Evelyn called. We had a little chat, and in the middle of everything, she asked if I'd be willing."

"I have your verbal agreement. If you need to hear it—"

"No, I believe you."

The man nodded gratefully, wiping his dampened forehead. Then almost as an afterthought, he admitted, "You could refuse. I mean, if you're having second thoughts . . . it would be bad news for us, of course . . . for Evelyn . . . but we won't force anyone to act against their will. . . ."

"I doubt if it matters," Michael confided. "Your eavesdroppers are going to fail, I'm guessing."

Again, time had to pass before the words could be heard. Then the man removed a single packet from his briefcase, opening it with a practiced flourish, its contents spilling across the middle of Michael's desk. There were glass wires and microrecorders, false hairs and at least three syringes, each containing a different ensemble of nanochines that would construct subtle, practically invisible sensory networks designed for the sole purpose of observing the aliens.

During the first visit, people who happened to be holding cameras at the critical moment failed to capture a single image. On the eve of the second visit, half a hundred ad hoc efforts were launched, and despite some initial excitement, no useful data were harvested. But these were a different species of machine, the man assured. He effusively described each of his tiny wonders. He was fond of them. He was proud of his work and its possibilities. Michael remained mute while the man described and promised, countering every possible objection with reasons that only a person devoid of genuine imagination would find compelling.

Finally, Michael said, "Sorry, but it still won't work."

Then before the insult could be heard, he added, "I'll do it anyway. Everything you've got. Put them on me. In me. Whatever Evelyn needs. And when the pricks get here, I'll give it my best shot."

The man accepted that weak promise. He nodded, and for the first time began to notice the surrounding office. "Evelyn tells me that you're very much respected in your field."

"Can't tell by appearances, can you?"

The little office was in desperate need of a cleaning. Michael's guest gave a snort, and then instead of disagreeing, he moved to a safer subject. "A Ph.D. in Biology," he remarked. "Your area's what now? Evolutionary theory, isn't it?"

"It's a bit narrower than that," Michael allowed.

The man nodded, remarking, "I'd think you'd have some interesting ideas

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

about our aliens. Their origins, and shared patterns of evolution. That sort of business."

"I have a few notions," Michael teased.

But the man didn't ask for details. He had work to do, and presumably he had many more stops to make over the next few days. "If you would, please. Let's start with your right arm."

Michael surrendered his bare wrist, asking, "Do you have any advice?"

"About what?"

"Should I stand as close as possible to them? Should I talk loudly? Softly? What would be best?"

"Be honest," said the man.

Then with a puzzled shake of the head, he added, "That was Evelyn's advice. She said, 'Tell Michael to say exactly what's on his mind.' "

"Do you want to know what's on my mind?"

"God, no," the man exclaimed. And then after a deep breath, he looked up and said, "Your left arm now. If you please."

There were no questions. The instant Michael found himself standing in the small white room, he began to talk. To shout. Before they even appeared, he said, "I don't like you much. You're fucking arrogant and manipulative, and I think this is a game for you. Nothing more."

His insults were met with silence. A multitude of half-formed faces were floating inside the most distant wall, saying nothing. When Michael stepped toward the faces, they popped into existence in another wall. He did that twice, and then gave up. All the while, he let an angry tangle of words pour out.

"You bastards," he said. "You don't care about shit, do you? You've turned us down twice, and it makes us crazy. We keep telling ourselves that we aren't worthy, and of course we want to be, and it always brings this rush of earnest, quarter-baked programs from every government and everywhere else. We pour trillions into space programs, because that's bound to impress you. We're spilling tens of trillions into social programs and environmental causes, trying to make ourselves more decent and respectable and honorable. And maybe we'll succeed in doing that. But we keep avoiding the central question here:

"What do you arrogant shits *really* want from us?"

Again, silence.

"We think we know. But really, it's just a pack of guesses. Old political ideas married to dreamy movies. I know that's where my mother got her vision of the future. She used to tell me—"

He paused, for an instant.

"In excruciating detail," he continued, "my mother told me about the new world that was coming. Everyone would be well-fed and happy, and everybody would be effortlessly smart, and when I grew up, I could travel to the stars. If that's what I wanted to do. I was going to be that wondrously free, she promised me."

Michael glared at the smoky faces.

Then with a smooth, old rage, he reported, "My mother killed herself. It was a few years after your first visit, and you're partly to blame. I wish I could hold you completely responsible, but the woman had other problems. Like a quick, stupid marriage that went bad, and she took an overdose . . . and I was the one who found the body first . . . and shit, shit. . . ."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The faces began to fade away.

"Where are you going?" Michael screamed. "Hey, jokers! I'm not even half-done with you yet!"

January-April 2055

"Hello, sir."

"Hello, yourself."

The young woman had a handsome face and sweet little body, blue eyes made from the finest smart-crystal, and she smiled at the professor with a gentle, fictional warmth. Without question, there was something unnervingly familiar about her. Half a century old, and Michael felt like a teenager again. He felt desire. He felt the nervous tang of excitement. "Are you in my Breeding Strategy class?" he inquired.

She said, "No, sir."

But the high-level classes were small, and he knew every student by name. With a shake of the head, he said, "I've seen you around campus." Was he flirting? Fine, he was flirting. If you did it badly enough, then you could avoid tripping over the various codes concerning student-professor relationships. "I'm sure I remember you."

"You don't," she said. Then again, she said, "Sir."

Reminding him of his age, no doubt.

"No," she continued, "I've come here on behalf of Preparation. I wish to talk with you. If you have a moment, that is." In a very sweet way, she gave him absolutely no room to maneuver. "If not now, we can schedule another time. Within the week, I should think."

"Now," said Michael. Then he showed off his best smile, adding, "I want to help Evelyn as much as I can."

"Oh, this isn't about her project."

"No?"

"I belong to an entirely different team."

"Of researchers?"

She said, "No."

Michael meant to ask, "What then?" Except another question intruded, and with a tight little laugh, he said, "Shit, you've seen the next one coming. What happened? Did the new mirrors catch sight of a starship?"

Her smiled tightened, telling him everything.

"Okay. When's the announcement?"

But she wouldn't tell him. Instead, she steered them back toward the previous subject. "My team has identified certain people who might garner more attention from the visitors. Important people. Influential and well-educated people. Like yourself, for instance."

Michael felt the warmth of the words, and then what lurked behind them. With a quiet, slow voice, he asked, "What do you want?"

"Just to talk for a moment," she promised.

He nodded, saying nothing.

The silence prompted her. Files appeared in her eyes, and while watching Michael, she said, "I know this is a lot to ask."

"What is?"

"You're an independent man. As is your right. Your writings and lectures

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

are part of the public record, and they make compelling arguments. I think you are wrong, and in many ways. But I can see why you believe what you do, and I can respect—"

"What do you want?" he interrupted.

"Success," she said instantly. Without a shred of doubt, she told him, "I want this year's meeting to go well. I want us to win the respect and help of our alien brethren, and really, when I look at your work, I see that you want the same ends."

Michael gathered himself, and then, with a harsh laugh, he said, "First of all, I haven't written more than a handful of works that even mentioned the aliens. And second of all, my public speeches on the subject are pretty much limited to offhand remarks made when my students seem exceptionally bored."

She watched him, saying nothing.

He felt prompted. "But you're not talking about anything public, are you?"

"Sir."

"You're spying on me. Is that a fair assessment?"

She said, "No."

Then she said, "Perhaps," and sat closer to him, using her smile and body and a coldly efficient logic. "I met your wife last year."

"My ex-wife," he corrected. "We divorced six years ago."

"She told me about your mother's tragic death. And I know that, for you, it was a personal nightmare. But no matter how awful it was, and no matter how badly scarred you feel, I can't help but think that you are being more than a little unfair to accuse the extraterrestrials of any role in a sick woman's suicide."

Michael watched the young woman.

"I am twenty-nine years old," she confided. "And just in my lifetime, the world has become a distinctly better place. I won't waste time spouting statistics. I certainly won't attempt to defend every aspect of our government or our strides in science. Humanity is prospering, and if you won't admit it to yourself, then I can only pity you. Sir."

With a tight little voice, Michael said, "I know who you remind me of. She was a girlfriend in college, as it happens."

Files passed through those crystal eyes. In an instant, she said, "Jackie."

Anger bled into a dumbfounded amusement. "So I'm that important to you. My entire life boils down to this. You want me to say nice words when the aliens arrive. Tell them how grateful I am for this chance and how much I'd like to belong to their shadowy union of worlds."

A toughness emerged in the pretty face. "Is that what I want?"

"Isn't it?"

She shrugged her shoulders, a look of disappointment blooming.

On second thought, the woman didn't look much like Jackie. In fact, she wasn't even that pretty. Michael leaned across his desk, and with a hard low voice said, "It doesn't matter anyway. What I say. What I tell them. Who I blame, and what they think of me. None of that matters at all."

The disappointment worsened.

Talking to the desk, she said, "I guess that's what I'm doing here." Then she looked up, asking, "How would you talk to them? I mean if you really believed your words mattered, if you genuinely thought that a dialogue was possible . . . how, sir, would you approach such a sterling moment. . . ?"

* * *

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Michael had lived in the same apartment since the divorce. It was a small home physically, though it had an extra room lurking inside a commercial-grade immersion matrix—a room approximately the size of a small continent and populated with a multitude of digital organisms evolving at their own breakneck pace. In early April, on the eve of the next visit, he sat on the puffy carcass of a giant digital grazer, staring off into the false pink sky and seeing nothing but his own thoughts. And that was the first time that he discovered a kind of happiness blossoming. Or at least, he felt a new contentment. Then with only an hour to go, he walked back to his physical apartment, stepping out onto the balcony just as his dinner finished cooking itself.

Neighbors were gathered on the green lawn below. Floating projections displayed the current images of the starship, but people mostly ignored them, fixing their own eyes on the cloudy and chilled sky.

Michael remained on the balcony, seated and out of easy view. A few of those neighbors had inquired about his plans tonight. They were divorced women and occasional lovers, and his honest rejections had plainly bothered them. But really, he wouldn't be much of a date tonight. Far too distracted, he was. The only people that he had the slightest urge to see were his children, and maybe, his ex. Was his family at home? Michael hoped so, floating his plate and rising, trying to slip indoors again without being noticed.

A commotion began on the lawn.

He heard people muttering. For a self-centered instant, Michael imagined that they had noticed him. They were calling to him, urging him to join them on this holy night. But of course they couldn't care less. Few of Michael's neighbors even knew his name, much less cared about his whereabouts. They were responding to something in the sky or in the projections, confusion bleeding into what sounded like a newborn anger.

With a word, his apartment called his ex's home.

She appeared before him, a middle-aged woman wearing her best clothes and a furious expression.

"Why are they doing this?" she barked.

"Doing what?" Michael asked, absolutely confused.

"Missing us," she said. "Aren't you watching?" Then she laughed at him, bitterly and with a certain relish. "Oh, God, you aren't. Are you?" She practically cackled, telling him, "The ship just changed course. From the looks of it, this time, they're going to race right on by us!"

2074

"I can tell you exactly who I blamed. Through all those years and all that self-inflicted misery, I blamed myself. That little boy crushing ants on the driveway was the culprit. That little sociopath who told the aliens that if he wasn't their friend, then he had to be their enemy. And do you know why I thought that? Because everyone else in that boy's life would have said the right words to the aliens. His friends would have. His grandparents. And yes, his mother. The boy was the bad seed. Watching his mother's awful collapse, the boy realized that he was the flaw in humanity. He had to be. Why

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

else would these wondrous entities from the far stars turn away from his species? He had said the wrong words; he had thought the wrong thoughts. For God's sake, the boy was killing ants when the aliens met with him. Everything was his fault, which made it my fault, and I wore that blame very badly for an awful lot of years.

"It sounds silly, even to me. An old man sits in a golden room, and even after all this time, he wrestles with a single event from his not so innocent youth. But that's the silly truth. Time and maturity help me adjust to the guilt. I can talk about those few moments of life, and I almost believe that I wasn't responsible. Almost. I can grieve for my dead mother, and just as important, I can blame her. She was lousy about men. That was one of her worst features. She was insecure and sad and ready to latch onto any dreamy belief that promised salvation. On her strongest day, my mother was an emotionally fragile creature. Maybe the wise and godly hands of the galactic union could have saved her. But then again, I suspect that your hands and your wisdoms have better things to do than patch up all these flawed little souls of ours.

"I don't know what you want from us. But I'm beginning to appreciate this process. This long, agonizing courtship of ours. In a lot of ways, humanity is the same as my mother. My species is insecure and alone, and we're desperate to be loved, and we will eagerly waste time and valuable resources in a careless bid to win your opaque affections.

"It wasn't my fault that you said, 'No.' Not when I was a child, and none of those times since.

"And all I can do now is be honest. To be truthful, with you and with myself. And if you want my opinion, then it's yes. I think it would be good for humans to join some kind of union of species.

"But of course, I don't know anything about what you're offering.

"This union of yours. Its benefits, and its costs, and all the sloppy details between.

"Really, you're nothing to me but a pretty face. And I am not my mother. You're going to have to do a helluva lot better than you're doing, if you want to get into bed with *me*. . . !"

Evelyn's message arrived, and Michael broke the encryptions while he finished preparing his dinner, and then he drifted down to the lowest cloud, eating the black air-shark steak while his old friend spoke to him.

"Are you settling in yet, Michael?"

Pretty well, he thought. His home was finished, and the world around him was nearly finished. Commercial terraformers had chewed up most of a smallish asteroid, then woven a transparent balloon around the dense new atmosphere. Michael's three-cloud home was free to him; he had designed much of the new biosphere, and the aerogel house was part of his fee. He was living more than a hundred million miles from Earth, in a frothy green world of relentless beauty, and he was happy in his life, and which part of that was the most unexpected?

"Thanks for your help, again," Evelyn told him. "I'm glad we could rail-up the hardware to you, in time."

This time, the aliens had to visit a thousand inhabited bodies; but they managed it with a single spectacular, three-day event, their starship expanding into many twists of plasma—an enormous cloud pouncing on the solar system from high above the ecliptic.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"This time, we actually got some data."

Michael stopped chewing, sticking his plate to the bluish-green foam beside him.

"Not much," she admitted. "But what we got was pure gold. This isn't for public consumption, but we managed to hear the aliens talking among themselves . . . in some common language that seems designed to be understood . . . and in the last six months, we've been able to make some good guesses about they were saying during these last interviews. . . ."

Michael looked over the edge of the cloud, watching a single pink parasol swimming past him.

"And we've come to some genuine conclusions, finally." Evelyn's voice was smiling. She sounded like a girl again, whispering something private and beautiful to a lover on the other side of her pillow. "It's really the most amazing thing, Michael. But don't tell anyone—"

"Stop," he told the recorder.

Then he bent and picked it up and blanked its memory by three different means, making certain that nothing remained of the message. And just to be certain, he dropped it over the edge of the cloud, watching as the device slowly, slowly descended into the bright emerald gleam of a newborn jungle. ❍

NEW LIGHTNING

Above the thunderheads
Above the familiar crackling splendor
Unseen lightnings dance:
Blue jets
Red sprites
Elves of undetermined color
Cones shooting up from cloudtops
Bearded globes brushing the ionosphere
Lenses of light expanding outward into space.
Each shape flickering stranger
Brighter
Briefer
Than the one below.

—Ruth Berman

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The author's latest science fiction novel, *Crossfire,* will be out from Tor next month. It's about a human planetary colony caught in the crossfire of a war between two much more technologically advanced alien species. In her newest story for us, she takes a look at some disparate human cultures and how they cope with . . .

THE WAR ON TREEMON

Nancy Kress

I. CLAREE

The third aka: Good is not corruption, Claree chanted, and it made no sense to her. Of course good wasn't corruption; if it were corruption, it wouldn't be good. She tried singing the aka, then speaking it conversationally, then muttering it darkly into the mirrored surface of her closed handheld. Nothing helped. Whatever depths the aka was supposed to reveal, she couldn't see into them. And in half an hour she would face the Novitiate Master.

Claree kicked a loose rock, then guiltily glanced around the dome. No one else had come in, thank the universe. The Quiet Dome, plunked down at the end of a long tunnel from the Novitiate like a shell in the tentacle of a one-armed octopus, was empty. It held only Claree, one of the Novitiate cats, and several hundred yellowish Parthia rocks that were supposed to make the Quiet Dome seem like outdoors. The clear pizoelectric walls seemed to disappear. In front of Claree was only the silent emptiness of Parthia stretching away to the horizon.

Sighing, Claree cleared a small space of rocks and sat cross-legged. *Good is not corruption.* She filled her mind with specific images: rocks and cats and the people in the Novitiate, their faces and hands and rock carvings and computers and shampoo bottles. *The real is concrete,* said the second aka, and Claree had mastered that one. She could block out the abstract, the theoretical, the non-existent generalizations and let her mind brim with the glorious touchable world. But that didn't help, either. No patterns formed from tangibles to turn *Corruption is not good* into anything other than a dumb tautology.

The Novitiate cat crawled onto her lap. A gray tabby with green eyes, he was called Phantom by everybody else but Cat by Claree, striving for concreteness. He curled onto her legs and went to sleep in the weak sunshine.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"At this rate, Cat, I'll never become a Servant of Peace," Claree said. The cat didn't care.

She sat still as long as she dared, not wanting to disturb the animal, whose soothing purr was supposed to help postulants concentrate. It didn't, at least not Claree, but the cat felt good on her skinny thighs, warm and heavy. He felt so good that she waited too long before dumping him off and running along the tunnel to the Novitiate, smoothing her short dark hair with one hand as she ran. Nobody was late to see the Master. Especially not someone in such a precarious position as Claree.

"Postulant, we have a difficulty with you," the Master said.

Claree dropped her eyes and didn't answer.

"You have been here two years last week, have you not?"

She nodded.

"And the third aka . . . nothing."

Dumbly, Claree shook her head. They were going to ask her to leave. Pressure built behind her eyelids, and she bit her lip hard to keep the swooping vertigo at bay.

"That's better," the Master said quietly. "How badly do you want to become a Servant of Peace?"

Claree raised her eyes in astonishment. How could he even ask that? She gazed at him, spare and competent in his black uniform with its tight gold neckband and blue service chips. The Master had advised on Celestia, New Earth, Juniper—he had been used in the Landing Day revolution at Dacha City! With the Orion Arm colonies having reached critical colonization mass, established colonies founding new colonies of their own, there was no better time to enter the service. Didn't he know how Claree felt?

She choked out, "I think it's the most important job ever. To guide politicians toward peace, to become a professional whose job is to manage violence and whose client is the entire galaxy . . . without stable governments you cannot conserve any of the institutions that bring prosperity and—"

"I didn't ask you to recite the Ten Points, postulant," the Master said dryly. "I asked how badly *you* want to become a Servant of Peace."

"With all my heart. I'll do anything to qualify!"

"Hmmmm." He studied her, his face grave.

"Please don't . . . please don't send me away, Master. I truly want to see the world according to the akas. I just . . . just. . . ."

He handed her a tissue. "You just can't see why good is not corruption."

Shamed, she whispered, "No."

"Can you see Yuki? Visualize her concretely, in the Quiet Dome, beside Hans. What are they doing?"

What was the *Master* doing? He was leading her toward a pattern. Not his role, and not in the rules. She was supposed to see the pattern, the meaning in each aka, for herself. Frantically she seized on the images of Yuki, of Hans, doing . . . what? Claree had never observed them doing anything together, and certainly not in the Quiet Dome.

The Master said gently, "Mwakwambe is there, too."

Mwakwambe . . . Mwakwambe. . . . Did Mwakwambe even know Yuki? Side by side by side their images were . . . nothing.

"Master, I haven't observed concretely enough." It was a shameful confession: *Observation is all,* said the first aka.

The Master shifted in his chair, and Claree waited miserably for her dis-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

missal. Where would she go, what would she do? This was all she had wanted her entire life.

"Claree," he said, "I'm going to invoke an unusual measure. You've exceeded the allowed time to master the first three akas, but, in rare situations, a postulant may be granted more time, if that time is served away from the Novitiate and under a Servant who is in an active order. This afternoon you will be on the train to Cramos."

"To . . . to the city?"

"And from there to the spaceport, with passage to Treemon."

"You're sending me . . . off-world?"

"To Treemon. Someone will meet you there and you will be taken to a Servant named Benn Ko. You may or may not encounter other Servants and their operations before you reach him. Learn from everything you see."

"But—"

"Pack lightly," the Master said, gazing at her, considering her, while Claree tried to understand what was happening. It was no clearer than the third aka. She stumbled from the room, just as the gray cat slinked into it, confident and sleek.

II. BRAK

In the second year of the war, Brak left his village on Green River to go alone into the mountains. He'd begun to have doubts about the war, its rightness and conduct, and everyone he broached these concerns to reacted with either shock or anger. Didn't he realize what these people were, what kind of world they wanted? Didn't he care that Treemon had been attacked?

Brak had no answers. He couldn't even articulate his own doubts clearly. So he decided to do a *wamu* in the mountains to clear his head and detoxify his soul and examine the nature of his doubts as best he could. He was fifteen; it would be his first solo *wamu*.

He traveled east, away from the beautiful populated valley, and away from the war far to the west. Brak was no athlete, and the climb upward was difficult in places for a spindly young man with a too-heavy shoulder pack. His mother had overloaded him with food and survival supplies. She'd also made him promise to do the *casu wamu,* the meditation without fasting, and to be home by dark of the fifth day. She hugged him good-bye without meeting his eyes.

Late afternoon of the third day he reached a small grassy plateau in the foothills, where he made camp. Brak liked that from the plateau he couldn't see civilization at all. While climbing the last three days, he'd had all of Greater Treemon laid out below him: the fertile valleys with their green fields and compost tanks, the eco forests restricted to no more visitors than the land could handle, the solar-powered plants where soy and high-protein vegetable bolin were made into tasty, nutritious food. It had all been beautiful, but Brak was obscurely glad to leave it behind for this hidden upland meadow bordered by exactly the kind of rock formations that promised caves.

Not that he had time to explore caves, he thought with a little spurt of resentment. He'd have to leave tomorrow morning in order to keep his promise to his mother. Of course, he could call her and say he was staying

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

away longer, but promises must be kept; they were the foundation of a trustful society. Anyway, using the comlink would break his *wamu*.

Brak made a fire, ate dinner, and activated the electronic perimeter. The eastern mountains were famous for cave hyluts, and of course Brak would never carry a weapon. His family was opposed to guns for anyone but the army, about which Brak knew almost nothing.

He tried to think about the army as the quick tropical darkness fell. Why did men and women join an army? How could you know your side was right? Was fighting always wrong unless you were attacked? Did thinking about these things mean that he, Brak, had a great soul, or did even wondering that about yourself mean your soul was petty and small?

He heard a noise in the darkness.

Nothing could get in across the perimeter, he reminded himself. Nonetheless, he moved a little closer to the fire, peering into the gloom.

The noise came closer.

"Hello?" Brak called uncertainly, because now the sound was definitely moving inside the perimeter. It took on a dark shape. Frantically he clawed through his backpack for the comlink. Before he could find it, the dark shape became a person, then the next second a girl, and then the neurostunner fired at him and he toppled sideways and out.

When Brak woke, he lay inside a cave, listening to a baby cry.

A *baby?*

Incredible, but there in a basket beside the blanket on which Brak lay was a baby. A warmly wrapped, howling infant. Beyond the basket lay a little boy, asleep on a nest of blankets. As Brak sat up, a girl walked over to the baby and picked it up, patting and jiggling it with no effect whatsoever. It was the girl who had fired at him at his campsite. She wore heavy boots and a black uniform of some sort. Not Treemon Free Army, not enemy green.

"Oh, you're awake," she said, smiling. "Good, because it's almost time to go. Do you have a headache?"

Brak shook his head, unable to speak. The baby screamed louder.

"I'll be right back," the girl said. She was very pretty, with floating fair hair above the tight gold neckband of a black uniform. "Just let me give this kid to someone who actually knows about babies." She walked away.

Brak jerked himself to his feet and started to follow her. He was stopped by an invisible barrier through which she passed effortlessly. The girl disappeared behind a turning in the rock, and the baby's cries grew fainter. Brak looked around helplessly. He now saw that in addition to the sleeping boy, two more children lay on blankets in this corner of the cave.

The girl returned. "All right, we're getting ready to go. Are you going to give us any trouble? We didn't plan on you, you know. You're really too old."

"For what?" Brak blurted. Fear arrived all at once, like a sudden downpour.

"I'm not the proper person to explain that to you," the girl said primly. "Incidentally, what's your name?"

Should he answer? Brak hesitated, finally gave his personal name but not his family name. "Brak."

"I'm Julu, private second class, Servants of Peace." She smiled warmly. She was only a few years older than he was. Two men rounded the cave turning and headed toward the two little girls on the far blanket. Gently they picked up the children.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Julu hoisted the sleeping boy in her arms. "Come on, Brak," she said. "Yani doesn't like to be kept waiting."

Yani? Waiting for what? Brak thought of refusing to follow her—but then what? What would that gain him? It might even look like cowardice, and he didn't want this older, sophisticated girl to think he was a coward. Maybe it would be best to do what he was told until he understood what was going on.

He followed Julu out of the cave.

III. CLAREE

Treemon City spaceport almost broke her nerve, until Claree scolded herself for cowardice. How could she benefit from this great service opportunity if she couldn't face a few native guards with irrelevant machinery?

The guards didn't consider the machinery irrelevant, of course. Claree had studied in the ship's library how wary Treemon was of outsiders, especially now that they were at war.

"Step this way, ma'am," the guard said. "Now, what you have to do is step into this decon booth, take off all your clothes, and push them through the slot in the opposite wall. Just press the button when you're ready. When the shower's over, the room will dry and biodegradable clothing will slide out for you. Your own clothes will be available when you come out, and the rest of your luggage will wait for you in the visitors' hall."

"I don't—"

"It's completely private, ma'am," the female guard said warmly. "No surveillance equipment in decon booths. You have our word, ma'am. Your modesty is protected."

Claree hadn't been worried about her modesty. Treemon, she'd read, was as sexually puritanical as it was fanatic about green technology. The two often went together: sanctity and inviolability of the planet, sanctity and inviolability of the body. Claree had gone through decon on the ship, but apparently that was not enough for Treemon. She smiled at the two guards and stepped into the booth.

The next step was tissue samples, for DNA scan. A medtech asked her formally, as he drew blood and took cell scrapings, "You are not the product of genetic engineering, are you, ma'am?"

Claree possessed genemods, altered in vitro, to replace genes that might have eventually resulted in three inherited-tendency diseases. The gene replacements were undetectable, merely substitutions of healthy alleles for deformed ones. The Master had instructed her on what to say. "No, I have no genetic modifications."

"And you have no biological implants? Non-living implants like eye lenses or heart valves are fine. Even mechanical muscle augments are tolerated, just nothing living. We on Treemon respect biological integrity."

"I have no living symbiotes." This they could check by Klein scan, and probably would.

"Thank you, ma'am."

Her small canvas bag had been irradiated. Her Klein scan, a tiresome procedure that took several hours, was negative. Freedom, she was cheerfully reminded by the official who entered her in the Treemon deebee, de-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

pended on secure, biologically protected borders. Although of course Treemon City was always happy to welcome journalists like herself; the more of the Orion Arm that knew of the workable utopia that had been created here, the better. Information must be free in a fully human society. Welcome to Treemon!

"Thank you," Claree said.

She was disposed to be critical. No place that thought so well of itself could be that good. But, riding through the city in a solar bus, heading for the outlying valleys, Claree had to admit that Treemon looked pretty good. She took three buses more than necessary, wanting to see as much as possible. Housing in places was modest, but she saw no squalor, no real poverty. Trees grew everywhere. Factories were ecologically sound. Children looked safe. And, even though Treemon was at war with its neighbor to the east, Ignatus, there were no soldiers on the streets.

Treemon kept the war on the enemy's ground.

As her fourth bus left the city, Claree was especially interested in the farms. Her journalist credentials gave her license to ask questions. She got off at a depot village, sauntered into the café (at least she hoped it was a saunter), and introduced herself as a journalist to two clean, intelligent-looking people with dirt on their boots.

"You don't raise meat animals, is that correct, sir?"

Obvious distaste crossed his features, but his reply was courteous. "That's correct, yes. Treemon is vegetarian. We respect the souls of animals as well as humans, since of course humans are animals. Each species must keep to its own kind."

"Have you ever tasted animal flesh, then?"

The woman burst out, "The very idea is blasphemous!"

Interesting.

"Not that we blame you for asking," the farm woman went on more calmly, "you're an outsider. I didn't mean to yell at you. It takes time for everyone to reach the same level. We in Treemon respect biological integrity above all." She smiled at Claree.

Claree probed, although she already knew the answer. "But the enemy you're at war with . . . the Ignati . . . they eat animal flesh?"

"They abuse every aspect of the planet," the man said. "Fields, water, air, life. All they know is exploitation and subjugation. They have no concept of biological integrity."

"So I read."

"I promise you this," the woman said with a sudden return of vehemence, "once we've won this war, their whole society will be transformed. Once they know what freedom and respect are, they'll naturally want them for themselves."

"I see," Claree said. "Thank you."

"Anything we can do for you, ma'am?"

"No, thank you," Claree said, and got back on the bus. They had not asked her one thing about the place she had come from.

The upland valleys were even more beautiful than the city. As the bus climbed, the temperature fell. Claree put on her warm, irradiated jacket. It still felt strange to be out of postulant uniform, to feel the cool air at the open neck of her soft shirt. She zipped up the jacket.

The bus stopped at the lower-mountain village of Demar just before dark. It was a raucous, jolly place, full of inns and bars for the miners that came

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

and went into this part of the mountains. The rough humor of such places didn't offend Claree. She stayed the night, and in the morning followed her directions to the meeting place. An hour of gentle hiking, and there it was, the skimmer, in a small clearing. A young man dawdled in front of it.

"I'm Claree Postulant," she said formally.

"Private first class Kel Servant."

Claree hesitated. "You're not in uniform. And I was supposed to meet someone named Benn Ko."

"We don't wear uniforms when we're among the natives," Kel said, looking surprised. "Didn't they tell you that? This is a non-requested operation."

No one had told Claree much of anything, except the name of her contact. She didn't want this supercilious man to know that. She said only, "I was told to meet Benn Ko."

"I'm supposed to take you to Yani. Maybe he'll get you to this Benn Ko. The quee message only came in from your Novitiate last night—you do know about quee?"

Claree merely looked disdainful. Quantum-Entangled Energy links for instantaneous interstellar communication was first-year stuff. She wasn't sure she liked Kel.

He repeated, "The message only came in last night. We were on black-out. Treemon isn't militarily sophisticated, and they prefer to keep to themselves, but they're not Industrial Age, either. They track everything they can, and they've got a few good satellites upstairs. Anyway, Yani couldn't come, the operation developed a complication. He sent me to get you. But I have another job to do, too, so I'm just going to drop you off where Yani can pick you up."

He sounded harried, and the arrangements seemed unnecessarily complicated. But it wasn't her place to judge. They would tell her what the operation was when she needed to know. Claree climbed into the skimmer, taking careful mental notes: *Observation is all.*

IV. BRAK

The skimmer flew low, behind mountains and barely above rivers, and after a while Brak realized that the pilot was doing everything possible to avoid detection. Who were these people? He didn't dare ask, and even if he had dared, it would have been difficult. Besides the pilot, there were Julu, the two men, and the four small children, three of whom were now awake and screaming. The noise was deafening. The three adults tried to calm the children, completely without success.

Finally one of the men shouted to the other, "Sedative?"

"Yani says no."

"Christ."

The skimmer flew on.

When it landed with a thump, they were far from Treemon, somewhere in the Eastern Scrub. Deep, dry canyons wrinkled the land. The pilot flew nearly into the mouth of one, making Brak clutch the sides of his seat. The sleeping boy woke up, looked at the strangers around him, and began to yell louder than the other three children, who now redoubled their flagging din.

Julu opened the door of the skimmer and lifted the child out. He kicked

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

her hard in the belly—Brak heard the sound of hard small boots on soft flesh—and she doubled over, setting him down. He ran off, tripped over a rock, and sprawled on the hard ground. Blood gushed from his face.

The adults rushed over to him. Julu lay gasping. No one paid the slightest attention to Brak. He slipped around the skimmer, so its bulk blocked him from sight, and began to run.

The ground was uneven here, so full of rifts and boulders and abrupt sheer, if small, cliffs, that he felt confident he couldn't be followed easily. He would get as far as he could and then hide. They wouldn't find him, they had their hands full with the small kids, there were a million places to hide. Brak could hold out until they left . . . and then what?

He couldn't think that far ahead. Gasping great lungfuls of air, he pushed himself to keep moving, keep climbing, keep sliding down the small treacherous precipices, don't make too much noise if he could help it—

He skid nearly on top of the cave hylut, sunning itself on the rocks.

The beast woke and bared its teeth, two terrible rows of sharp angry knives. Brak drew a sharp breath and started to back away. No, you were supposed to hold your ground with a cave hylut . . . no, you were supposed to—

The hylut sprang at him.

Brak screamed. In mid-air the beast heard the scream, shivered, and fell senseless to the ground. Brak stared. Then he saw the girl holding the gun, and the hole burned in the hylut's hide, still smoking a little. The stench of burning flesh and foul hylut odor wafted toward him on the breeze.

"I got him," the girl said in wonder. She smiled broadly. "Are you all right?"

"Yes . . . thank you."

"You're with Yani, right? Or Benn Ko? Here to pick me up?"

Brak said nothing, trying to fit the pieces together. They didn't mesh. She was younger than Julu, he saw now, not as pretty, skinny, and with short dark hair in frizzy waves.

"I'm Claree. I've only been here a half hour or so, since they left me for pick-up. Is the skimmer over there someplace? Are you a postulant?"

Something was clearly expected of him. Brak shook his head.

Her eyes widened. "A Servant already? How old are you?"

Again he just shook his head.

She looked abashed. "I'm sorry, I didn't realize I shouldn't ask that. I'm new, you know, just a postulant assigned to Benn Ko. I'm . . . I'm still working on my akas." Sudden doubt creased her features. "Why weren't you armed? Out here, I mean. Even I . . . oh, gods. You're not a Servant at all, are you? A local?"

"Yes," he answered, because if she didn't realize that there couldn't be locals where there was nothing local to farm or mine or gather, then it wasn't his business to enlighten her. Could she be . . . oh, shit . . . an agent of the Ignati? Their women held the power positions, after all, they had no sexual equality at all. But . . . what would an agent of the Ignati be doing in the Eastern Scrubs?

"The situation is this," Claree said with sudden determination that looked to Brak as if it were partly desperation. "I probably just said too much. If you could not tell anyone you saw me, or that I said . . . oh, gods!"

He saw an advantage. "I won't say anything to anyone if you tell me what you're here for. I mean, I need to be sure my . . . my village isn't in danger." He was quite proud of this last invention.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Claree chewed her bottom lip. "All right, but only a little. And only because everything I read said that your people, Treemon people, honor their promises."

"It's the foundation of our society," he said, truthfully.

"All right. I'm a Servant of Peace, or at least I will be when I finish the training. We're here to help bring the war between Treemon and Ignatus to peace. I don't know any details, but we're operating undercover."

Brak felt dizzy. The Servants of Peace! They were half legend on Treemon, which had prided itself on its curtailed communication with the rest of the galaxy. *"We live lives of harmony with the planet,"* his teachers all said, *"and let less enlightened peoples choose their own path, as long as they leave us alone in return."*

"You must know a lot," he blurted.

Claree blushed. "Well, not me, of course, I hardly know anything, but the Servants . . . you can trust us, Brak. Whatever this operation is about, it can only bring good to your people."

"But they abducted me. And four other children."

She frowned. "Abducted?"

"They kidnapped me!"

"I don't know anything about that. But if . . . I'm sure it's only temporary and for a good reason. They'll return you to your . . . family?"

"Mother and father and sister!" He was indignant now, and the reek of the cave hylut made it obscurely worse. "And you killed that creature."

"It was going to kill you!"

"Well, yes. But it was just following its nature. Still, you were justified in the murder, I think."

"You're a prig," she said flatly.

"I am not! I just think about things!"

"In the abstract. Not the concrete thing itself. Only the concrete is real."

"Oh, dung," Brak said boldly, and then was smothered in confusion. This girl was with the *Servants of Peace*. How dared he—

"You don't understand," she said loftily. "But whatever the Servants need you for, you won't be harmed, and it will be for the good of your people in the long run. Good is not corruption." Suddenly her eyes widened and she let out a cry of delight.

"What—"

"Oh, I could kiss you!" Claree jumped at him and, before he could recoil, she did kiss him.

Brak felt himself go scarlet. A second later anger flooded him, an anger he didn't understand, and without even thinking about it, he took Claree's gun from her slack hand and pointed it at her.

"Brak—" she said, in honest bewilderment.

"I'm taking this. And I'm leaving here. I don't know why I was kidnapped, but it isn't right. I have the freedom to go where I want! It's a basic freedom we have and the Ignati don't . . . to say the least! Now, I'm leaving you here—" But she would just run back to the people in the skimmer. Should he tie her up? With what? And what if another cave hylut came by and ate her? Brak could never, ever be responsible for a human death. Hopelessness flooded him. This was not the way a *wamu* was supposed to go.

Claree said, sudden formal, "Brak, you don't understand. The Servants of Peace are professionals. Our job is to manage violence, and our client is the entire galaxy. We observe carefully and then do what we can, without caus-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ing any violence ourselves. There isn't any reward in it for us, except for promoting stability."

Brak considered. That all sounded good. He didn't seriously weigh the idea that she might be lying, because she so clearly believed what she was saying. Also, Brak had not often been lied to, and he tended to believe what he was told.

She went on, gaining momentum. "Stability is good, Brak! We keep societies from destroying themselves, or each other, so that all the good things that require stability can flourish. Learning, art, science, agriculture. You can't have those things if the fields and cities are all torn up and bombed."

That, too, made sense. His parents stressed the beauty of calm, stable lives, lived in freedom and beauty.

"The Servants of Peace don't take stability for granted," Claree said. "We have experience with all sorts of societies, and we know that human beings learn from experience, not abstracts."

And that, too, was reasonable. The Treemon education system was built on hands-on experience. Certainly Brak had learned more about soil management from working with old Mr. Garander than from any text software.

"We're here to help, not harm." Claree said solemnly, her dark eyes shining, and Brak lowered his gun.

"All right," he said, feeling very mature. "I see your point."

She grinned happily. "Good. Can I have my laser?"

He handed it to her, not without relief; his father violently disapproved of guns. In the distance he heard a clatter.

Claree said, "I think they're coming for me. Let's go meet them, Brak."

He followed her, scrambling over loose rocks and uneven ground. He had chosen to follow her, to trust these people, yet he wished they hadn't shown up so quickly after he decided that. It might look to outsiders as if he hadn't actually made a choice.

They were heading in the direction of the breeze, and he turned his head to avoid the foul stench of the dead cave hylut.

V. CLAREE

It was big, a much bigger operation than she'd expected. Big, and totally baffling.

She was glowing from her persuasion of Brak to return with her. "Good work, Claree," Yani had said when she finally met him. He was a big man, very dark, with a thick beard and eyes of a peculiar color, somewhere between gold and gray. Genemod, she guessed, and wondered how he'd gotten through the Treemon City spaceport. Although, she realized a moment later, of course he hadn't come in that way.

"Are you going to take me to Benn Ko?" she asked. "My Master said you would."

"Eventually. We have our hands full right here, as you can see." He swept his hand in a wide arc, smiling.

The cave was huge, and very deep in a low hill that, from the air, had looked like a thousand other low, barren, irregular hills. The inside had been coated with foamcast and fitted with air-renewing genemod micros. Powercubes cast light. There was foamcast furniture—a minimum of furniture,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

true, but someone still had had to transport enough compressed canisters to spray the tables and chairs into shape. Foamcast divided the huge space into three rooms: the all-use one that Claree stood in now, a closed one in the back that she hadn't yet seen, and a nursery for the ten children.

Ten children . . . all abducted from various parts of Treemon. Claree tried not to flinch from the word. Abducted, kidnapped. Yani had reassured her they would all be returned in perfect health to their families, and of course Claree knew they would. But . . .

"Why are the children here?" she blurted to Yani.

He smiled. "Did your Master ever make you observe things and find the patterns for yourself?"

"Of course." It was the basic method of instruction—surely Yani knew that?

"Then do it now."

The tone of authority was unmistakable. So was the rebuke. Claree felt herself flush with heat. He thought she was stupid. She was as much a failure here as at the Novitiate.

"You did do good work with that Treemon boy," Yani said, smiling at her. "Now go on doing good work." He stood and strolled away.

She was reprieved.

When the first team of two men came back a few hours later carrying an enormous plastic box between them, Claree stayed silent. She'd learned her lesson. *Observation is all.*

They carried the box into the back room. Claree sat quietly with the infant, whom she'd offered to watch. A woman who seemed to be a nurse had accepted gratefully. Awkwardly, Claree held the baby up on her shoulder as the nurse had showed her and walked around the main room in large circles, crooning a wordless tune. The baby seemed to like this, or maybe it had just been fed. Anyway, it went to sleep. Claree pulled a corner of its blanket over its face and pretended it was still awake, so she could go on pacing slowly, watching everything.

There were only seven kids left in the "nursery." Brak had vanished.

All of the medical personnel, or what Claree had identified as "medical personnel," were in the back room, which remained tightly shuttered. A girl called Julu, whom Claree had met and didn't like, loitered at the closed door. She was armed.

Yani was not in the cave.

The skimmer was gone, and its pilot.

Claree strolled, jiggling the baby, over to Julu. "Hello again."

Julu smiled. "Is it asleep?"

"Not yet. Is this child next to go in there?"

Julu shrugged. "They don't tell me, of course. But I think they're working down in age."

"Yes," Claree agreed absently, crooning a different tune at the baby. "Do you like kids?"

"No, not really."

"Me, neither," Claree said, "although Brak told me he did." She waited to see if Julu would catch the lie.

"They do, the Treemon. In fact, they worship their children. Lucky for us."

Claree took a risk. "Well, not luck. Yani would have designed the operation differently if the Treemon were indifferent parents."

"Yes, you're right," Julu said. "I didn't realize Yani had told you about it."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"We had quite a talk," Claree said modestly. Julu was stupid. How had she even gotten through her Novitiate?

"Well, he can be very good to new Servants," Julu said, and blushed, and Claree saw her clearly. She was a type, and very pretty.

"When will Brak come out?" Claree asked. Julu had said they were going down in age; Brak, who stumbled into the operation, was not really a child.

"Post-op in the nursery," Julu said, "so the doctors can start on others as soon as they get the parts."

"Yes," Claree said, and pinched the baby so it woke up and cried, and she had an excuse to shrug at Julu and wander off, jiggling and crooning.

Parts. Parts of what? They were performing some medical procedure on Brak, on all the kids in turn, that would aid the peace effort. What would do that? It must be something temporary, reversible, non-painful. Recording devices? Trackers? Those didn't make sense. *"They worship their children. Lucky for us."* Ransom? But the Servants didn't need money, and how would ransoming children bring peace?

Another thought came to her: Were all the children Treemon? Could some of them be Ignati? The people of the two countries didn't, she thought she remembered, look much different from each other . . . or did they?

Still lulling the baby, who was dozing off again, she strolled into the nursery. The nurse, pleasant and middle-aged, overweight in her too-tight Servant's uniform, smiled at Claree. She was changing a child's soiled diapers. Claree walked casually around the windowless room, studying the seven children, some asleep and some having a snack and some playing with a pile of brightly colored toys.

Two were blond, with blue eyes.

One was a sort of dirty blond, with brown eyes and light brown skin.

Two had black hair in different stages of curliness, medium skin, and changeable eyes, greenish-brownish-gray.

Two were brownish sort of redheads with darker skin and lighter eyes.

All their features looked the same to her, the too-small noses and too-big eyes and pudgy rounded chins of little kids. If these children were two distinct racial groups, Claree couldn't see it. Moreover, she remembered reading that Treemon, which made a religion of tolerance, was comprised of all ethnic groups, as long as the individuals adhered to the Treemon ideals of biological integrity, vegetarianism, personal responsibility, freedom, and all the rest of their admirable creed.

"Mistress," Claree said to the nurse—it was impossible to address the woman by her first name, which was Ada. Claree was not that far from the Novitiate crèche herself. "Mistress, what do Ignati children look like?"

The woman looked startled. Despite her age, she was only a private first class, which suggested that she was probably not too bright or curious. The Servants had places for such people, of course.

"Why, Ignati are taller than Treemon, of course, but otherwise pretty much the same . . . aren't they? I think I was told so."

"The Ignati are a matriarchy," Claree said, not because it was relevant but because she wanted to keep the woman talking.

"Why, yes. They don't have sexual equality, like the Treemon. The women rule, the men are warriors. Their families are . . . I can't remember the word. But children belong to a family of their mother and her brothers and sisters, not the child's father. They might not even know who he is. They're sexually free, I'm told." She said this with neither approval nor disapproval.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"They're fierce fighters," Claree said.

"Oh, yes. They train all their lives for it. Not much literacy, but fierce fighters. Otherwise Treemon would have won the war long ago. Treemon has the more deadly technology; they just don't like to use it. Peaceful people, as long as they're left alone."

"Ah," Claree said. "The baby's asleep, can I put it in its basket?"

"Yes. She's a girl, you know." The woman smiled; to her, the children were people. "Her name is Drina."

Claree put Drina in her basket and returned to the main room just as Yani came in from outside. He looked hot and dirty, as if he'd covered a lot of ground on foot. Outside, it was full dark.

"Julu!" he called. "Get all personnel out here as soon as they can. Leave just one nurse on duty. Anders, shift signal routing. Make them think we're at B now. Kel . . . where's Kel?"

"Here," he said, materializing beside Claree. "Where's Tuki?"

"Dead," Yani said. "They shot down the skimmer. Kel, get the—" He suddenly noticed Claree. "You, go in with the children, close the door, and stay there. Now."

"Yes, Master," she said automatically, and did as she was told, simmering with resentment. How was she going to learn anything if she was left out of everything?

"What's happening?" the nurse said, alarmed.

"I don't know. Give me something to do."

For the rest of the evening, Claree grimly tended children. She set them to watching a software cube of some idiotic animals cavorting, and then she helped put them to bed. Eventually she fell asleep on a blanket herself. If any of the children had bad dreams, she didn't hear them cry out.

In the morning, Brak lay on a cot beside her blanket, heavily asleep.

Claree helped herself to cold food and hot tea from a pile of stuff beside the closed nursery door. She brought tea to Nurse Ada, too, who took it gratefully. "I haven't had any time for tea yet this morning."

There were only four children in the room, including the boy who had been missing yesterday. Claree sat beside Brak and waited for him to wake.

An hour passed. "What . . . who . . ."

"It's Claree," she said, managing a smile. "How do you feel?"

"Sick. No, weak. Hungry."

Nurse Ada came bustling over. "You're hungry, young man, that's good. The post-op drugs these days are amazing! Claree, you brought him something, you're that thoughtful, dear. Give him plenty of water." A child wailed and she moved away.

"What happened?" Brak demanded.

Claree didn't want to admit that she didn't know. "Here, eat some of this."

He looked at the bread she held out with distaste. "Is it animal flesh?"

She had no idea. Portable field cookers mixed up nutrients for optimum balance out of whatever raw foodstuffs were put into it, animal or vegetable, then molded and baked the result into "bread."

"I don't know," she said truthfully.

"Then I don't want it."

"You have to eat."

"Animal flesh? No, I don't. Do you grant animals the right to use *you* that way?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Claree wasn't interested in this ideological foolishness. She put down the bread and poured him a cup of water. Brak drank it, wincing as he raised his head. "All right, Claree, what did they do to me?"

"I don't know. They didn't tell me."

To her surprise, he accepted this. Because the Treemon were so honest, or because he was so willing to believe she was so negligible? Irritation suffused her.

He said, "That woman mentioned 'post-op drugs.' Did I have an operation?"

"I told you, I don't know."

He lay back on his pillow, frowning at her. The door to the nursery opened and two men entered, carrying two sleeping children.

"Put them here," Ada said. "Everything went all right?"

"Perfectly," a man said. He looked very tired. "Which three next?"

"Three?" Ada said. "I thought it was only two at once."

"No time," the exhausted man said. "One will have to just not get it. Yani says we only have a few more hours at the most before we have to get out."

"Hours?" Ada said. "But you can't! Recovery—"

"They have to go back, Ada," the man said. "Don't argue with me, and don't argue with Yani if you value your head. The kids will be all right. But Treemon weapons and detection are better than we thought. We have to get off-planet."

Claree began, "I have to find Benn Ko—" but nobody was listening to her.

Ada said grimly, "We'll be ready." Claree saw an Ada she hadn't glimpsed before, the committed Servant of Peace inside the soft baby nurse.

Brak said, "What the dung is going on?"

"Christ," the man said, lifting a child in either arm, "nobody *told* him?"

"Yani wants to do it," the other man said. "He's a special case, after all. And a valuable asset." The two left, carrying three children.

Claree couldn't sit still. Ignoring Brak's furious questions, she paced over to the child who hadn't been taken. A girl, about three, sitting with a plastic cube into which various plastic shapes were inserted through the correctly shaped hole. Claree watched as the child, with enormous concentration, tried to push a cube through a triangular opening. What had this child missed having done to her?

"He's a special case, after all," the Servant had said of Brak. Well, wasn't she a special case, too? The Master had said she was. Maybe Yani would enlighten her when he enlightened Brak. Maybe somebody would.

The main room, which Claree crept into cautiously for the first time in sixteen hours, was completely deserted. She stopped on the threshold, shocked.

Blood smeared the floor. Objects were strewn around, some half-packed in canvas bags, some smashed. Two of the big boxes that Claree had seen the two men lug in a few days ago stood in the room, both lids raised. Claree looked inside.

The first one held only smears of blood. In the second was a dead cave hylut. She reached in and touched it; the body felt very cold, although Claree recognized that the cooler had been turned off. Had the animals been brought in for food, to be dumped into the field cooker to supply protein for bread and soup?

No. Snaking from the inside of the cooler were various tubes, probes, injectors still connected to the cave hylut's body, although none were activated. Animal protein for a field cooker was kept cold, but nothing else. Or was it? Claree hadn't taken her Field Survival courses yet; they were for third years.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The door to the back room opened and a woman came out in bloody disposables, which she stripped off as she walked. "All three are going well," she said to Claree in a contented, exhausted voice. "They don't need me. Wake me when we have to go." She lay down on a blanket and immediately fell into the dead sleep of someone who'd been awake for days.

Claree recognized her own small canvas bag in the corner. Someone had packed and closed it.

Yani came out of the operating room with two Servants, talking in low tones. Claree couldn't make out the words. When he finished, all three walked toward the nursery, and Yani beckoned Claree to follow.

"Ada, we're going. The other three kids will be out here in a few minutes. It has to be that way. You're on the last skimmer flight, we only have one craft now and can't leave all together, so you've got about an hour. Do what you can for the children. It might take as long as five or six hours for the Treemons to get to them. I don't want any of them so much as mildly dehydrated or scratched from tripping over their own feet. Kel is bringing you soft restraints."

Ada nodded, her face harder than Claree thought possible.

"Claree," Yani said, "come over here with Brak."

Yani took Ada's stool, the only actual seat in the sparsely furnished room, and set it beside Brak's cot. Claree stood.

Brak glared at Yani. "What did you do to me!"

"Made you an asset for peace between your country and the Ignati."

"I don't understand!"

"Of course you don't." Yani closed his eyes briefly and Claree was afraid that he, like the doctor, was going to instantly fall asleep. But Yani pulled himself together and gazed at Brak with remote kindness.

"Brak, who is going to win the war?"

"Nobody knows that yet."

"Wrong. We know. Your people, the Treemon, will win, and pretty soon. You have the technological advantage. Plus the better land, crop yield, mining rights, and literacy."

"They attacked us first," Brak said, and Claree saw that somewhere inside himself, this boy felt guilty over the advantages he didn't deny.

"Of course they attacked you," Yani said, running his hand through his dirty hair. "They have a very high ratio of young men to old rulers, which nearly always leads to war, civil war, or revolution. Demography is destiny."

Brak gaped at him.

"You thought it was about *ideology,* didn't you? Freedom versus repression. Education versus ignorance. Equality versus fixed places in a society ruled by the women born to be at the top. It's not. It's just war."

Claree couldn't restrain herself. "But . . . but what have we done to stop it?" *What have we done to these kids, and why?*

"We couldn't stop the war. Instead we're stopping the deadly aftermath, the violence after the war, by shifting the conflict. It isn't going to be a united Treemon against a conquered Ignatus, not any more. It's going to be a bitterly divided Treemon against itself."

"Why?" Claree demanded.

"Because we've just violated their deepest beliefs about their most valued possession, their children. Ten of them, nine small appealing ones plus Brak here, have had their biological integrity irreversibly compromised. Their hearts removed, destroyed, and replaced with the hearts of cave hyluts."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Claree stared at him. She couldn't take it in. Brak began to scream and claw at his chest.

"You . . . we . . . tortured children?" Claree said.

"No," Yani said wearily, "they're not tortured, not harmed. The xenotransplant has been treated to eliminate bodily rejection or malfunction. The hylut hearts will function perfectly throughout the children's normal life span. Ada, we need you here. Give the boy a sedative."

"But . . . *why?*"

"Because we're Servants of Peace," Yani said.

Claree stared at him. The bloody cave hylut in the cooling tank, the blood smeared on the floor . . . the baby she'd held on her shoulder, crooning to it, with the heart of that stinking foul carrion-eater. . . .

She cried at him, before she knew she was going to say anything so childish, "Why did you keep me here? Why didn't you send me on to Benn Ko, the way the Master said you would?"

He didn't reply, but she saw the answer in his face: He *was* Benn Ko. This was whom the Master had wanted her to observe, what he'd wanted her to witness. She turned her head just in time to vomit on the floor and not on Brak, the victim, the accidental sacrifice, the asset to peace.

VI. BRAK

It didn't make sense. Even after the nurse gave him a patch of something and Brak could feel the horror drain away, the panic and anger, he retained the idea of senselessness. The artificial calm was a drug, he knew, but the senselessness was real. He had to understand. Understanding this was the most important thing in the world, because even in his inexperience, he knew that the drugged calm was not going to last.

He had a cave hylut heart in his chest. He was a monster, biologically compromised, a bestial heart from a reeking dangerous animal. . . .

He had to understand.

The man, Yani, seemed to know Brak's need. He said to Claree, "Sit down. No, don't clean up that puke, this is more important. Have some sense of proportion, postulant."

She did as she was told, looking, Brak thought, as numb as he felt. Had they given her a drug, too, while he was screaming? But wasn't she one of them?

Yani said, "Brak, when your people win this war, which they will do, what do you think will happen?"

He didn't answer, couldn't answer. But he struggled to sit upright on the cot. It suddenly seemed important to sit upright, to not be flat on his back like an infant. No one helped him sit.

"I'll tell you what will happen, Brak. You will try to make Ignatus over into Treemon. You will dismantle their military, break up the rigid autocracy, make men equal to women, try to teach everyone to read well and farm organically and stop eating flesh."

"So?" Brak said.

"You believe you will replace bad values with good ones. What you will really do is replace the arrogance of power with the arrogance of self-righteousness. And you will cause a revolution, with much more destruction and violence than the war you win. *Much* more violence. Tens of thousands will

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

die. Because Ignatus does not want your values: individual freedom, personal tolerance, anti-centrism. They are not the only values."

Brak burst out, "But they're the best!"

Yani smiled wearily. "Perhaps. But freedom, tolerance, anti-centrism . . . they leave many people feeling disconnected, with no assured place in a settled authority structure of family and caste."

"They must make their own places," Brak said stoutly.

"Some cannot. Some *will* not. Some will always feel unmoored in such a shifting world. You are very hard on these people, Brak, who include the old and the weak and the untalented and the fearful. You would cut them all adrift from anything they can count on."

"But—"

"You assume," Yani went on, as if Brak hadn't spoken, "that everyone must think like your people. You assume that if they could only be shown the error of their ways, they'd *want* to think like you. Such a stance is wrong, immoral, and dangerous."

Anger flooded Brak, breaking through the calming drug. "'Immoral?' The *Ignati* attacked *us!*"

"Yes, I know," Yani said, "but to the Servants of Peace, that's immaterial. What matters is managing further violence so it stays at a minimum."

"By using violence on me? By cutting open children and replacing their hearts with beasts'?"

Yani shrugged. "Your people's beliefs grant to beasts spiritual equality with yourself, and you locate your souls in your thinking mind, not in your cardiac organ. So why should you mind what we did to you?"

Brak gaped at him. Claree burst out, "It's only that same old shit—'The end justifies the means'!"

Yani smiled. "Very good, Claree. Sometimes it does."

"No," she said. "No!"

"Not even to prevent or curtail genocide? Brak, do you know what will happen in Treemon as a result of what we've done? Your people will be told in a few hours. They will come to get you kids. Then a tremendous public attention will focus on you: on the villainy of what we've done, the monsters we've created, the children who are those monsters but are still their children. Factions will form. Beliefs will be severely questioned. Unity and complacency will both fall like huge asteroids in the middle of your puritanical society, sending up clouds of dirt and grit. The self-righteous purists will never be able to be so pure or so self-righteous again. One of those little girls with a cave hylut's heart is your lieutenant governor's daughter."

Brak swung his legs off the cot. Dizzy for a moment, he could nonetheless sit up, like a real person.

"Treemon," Yani continued, "will never again be able to make as united, as self-righteous, as arrogant an assault on remaking Ignatus. Ignatus will not in consequence revolt quite so hard, and Treemon will not respond with the genocide that isn't ever far from the puritanically self-righteous."

Brak said hotly, "My people would never—"

"So you think. Are you going to tell me a boy like you never had his own doubts about this war?"

The *wamu* in the mountains, the shocked look on his friends' faces when he talked to them, his mother's averted gaze . . . all less than a week ago. Brak said nothing.

Yani was relentless. "What do you say to that, young Brak?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"I say that you Servants of Peace could become as dangerous as the violence you're trying to prevent."

"Oh, gods, yes," Yani said, suddenly looking a decade older. "Don't you think we know that?"

"I don't know," Brak said. It seemed to him, teetering on the edge of a cot in this unreal place with these unimaginable people, that he was no longer sure of much of anything.

"*I* know!" Claree cried. "Yani, Benn Ko, whoever you are—I'm resigning from the Servants of Peace! Right now. This minute. You're evil!"

"Are you sure of that? We're not the ones killing anybody. We never do."

Claree burst into tears. Yani didn't try to help her. He gazed at her with tenderness, but it was Brak who staggered unsteadily to his feet and put his arms around the sophisticated girl from off-world, the girl who had talked to him so joyously about the Servants of Peace over the dead body of a cave hylut. She felt bony in his arms, a fledgling bird. Brak looked at Yani. "She'll tell the galaxy what you're really like."

"I hope so," Yani said. "That too is part of the process."

"What 'process'?" Brak spat. Holding Claree emboldened him.

"The process of preventing ideologies from becoming too rigid, and the right from becoming too righteous. Muddling things up. Balance, some might call it."

"Or corruption!" Brak said, and the trembling girl went still in his arms.

"Corruption is a less intrusive way of intervention than is violence." Yani stretched his arms over his head. "I must go soon. Claree?"

"Not with you! Never!"

"Your choice, postulant. Although I'm sorry for it. Brak, your people will be here for you and the children later today. We'll give them exact coordinates, once we're well away. Until then, you and Claree will need to manage the little ones. And eventually, you know, your folks will accept you as if the xenotransplant had never happened. They'll have to. Their own values of tolerance say so. And through that, they'll end up accepting a great many other aberrations, as well."

Brak didn't answer. He watched Yani stroll off, and a complex feeling stirred in him.

"I hate them!" Claree cried, pulling away from him. "Evil, immoral . . . and I never knew how corrupt they really are! I never knew! Corrupt!"

"Yes," Brak agreed, and then, from some depths of drug and thought and emotion, "No. Claree—"

But she had begun sobbing again, and she wasn't listening to him.

Brak, dizzy, sat again on the edge of the cot. What was he going to do with her? Take her to his mother, of course. And if she wanted to stay in Treemon—but she was an off-worlder! And yet, looking at her, he had a sudden perception that even though she ate flesh, she would fit in on a Treemon farm or in a Treemon city. It had something to do with her being so straight-forward, so single-minded, so sure of what's always right. Claree might even be happy in Treemon, might feel at home.

As *he* never had, not really. And now he would fit in even less.

Brak gazed after Yani's exhausted, retreating figure. The Servants of Peace owed Brak, now. They had fouled him, used him, turned him from being a person to being an *asset*. Oh, yes, they owed him.

He wondered if they ever took postulants from backwater worlds like Treemon, and how old you had to be to join. O

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

FOUR LAWNS

The back lawn of the Morrises' house in White Plains
had been given up for lost, unseen and unwatered.
Not even weeds grew there, except a kind of creeper vine,
which hugged the patchwork of cinderblock
intended, in a rainier era, to keep the basement dry.
Old Mr. Morris would have sold the place ten years ago
if the market hadn't simply collapsed.
He'd never expected to live so long, and now Jason was
back
in his attic room, sitting alone
with his old manual and a wall of unplayable CDs, staring
in the late afternoon at the neighbors' sprinklers,
waiting for civilization to come to an end.

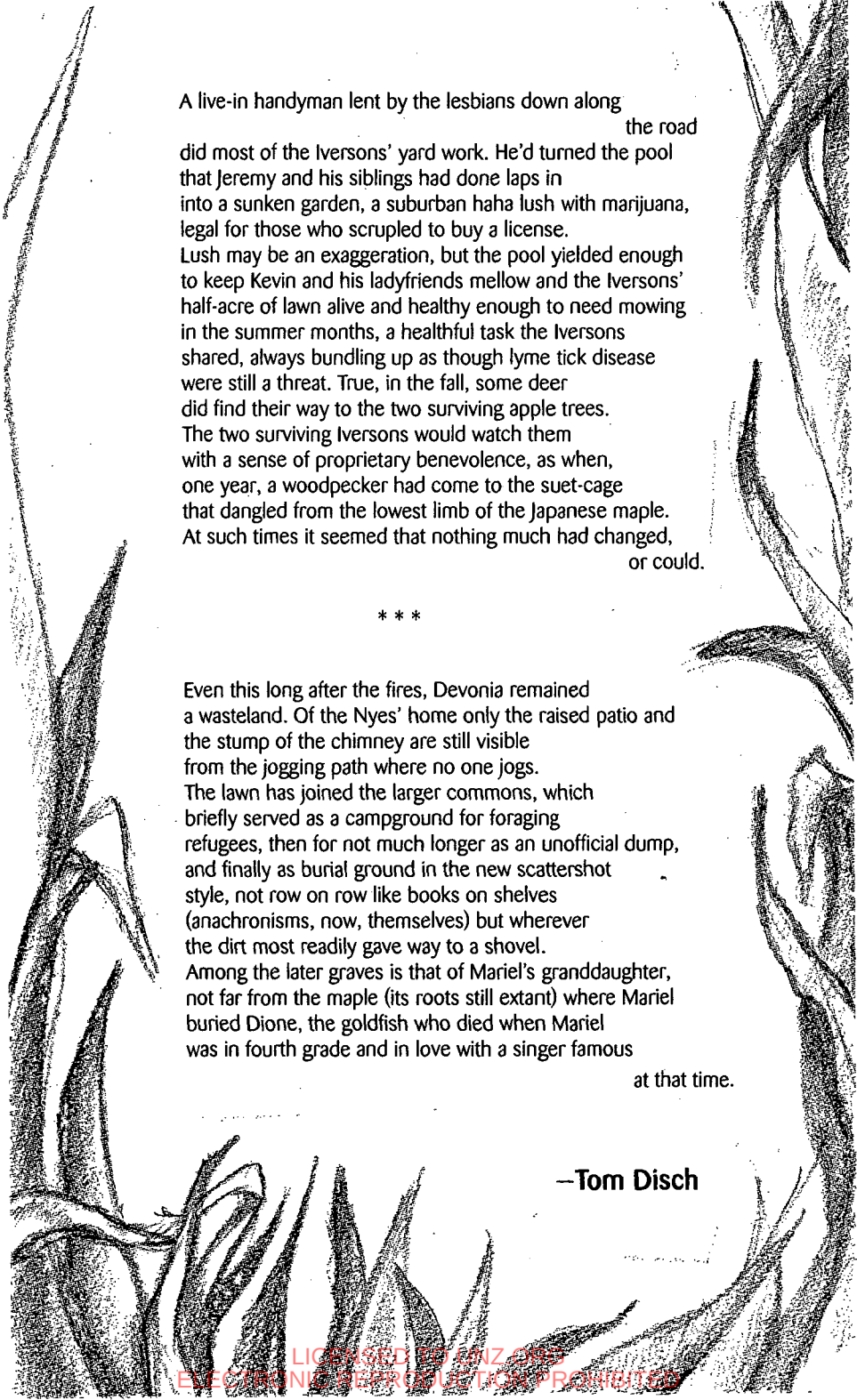
* * *

Lycelle Beecher's step-mother had always had
a whimsical streak, and now the house on Moonlight Drive
was under siege from those whimsies in the form of a
nation
of crudely painted plywood garden gnomes, snapped
up in the last days of the Willowville Garden Center,
ten bucks for as many as you cared to haul off.
Instead of irises silhouetted against the faux brick trim
were multiples of Snoopy, Garfield,
and other trademarked entities
giving their last almost-for-free performances
in violation of copyright law. In summer they tend to be
lost among the weeds, but once the first big snow
has restored the lawn's geometry
they can be as daunting as black-and-white comedies
seen without sound, at two A.M., mirthless, naked, and
forlorn.

* * *

Illustration by June Levine

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED



A live-in handyman lent by the lesbians down along
the road
did most of the Iversons' yard work. He'd turned the pool
that Jeremy and his siblings had done laps in
into a sunken garden, a suburban haha lush with marijuana,
legal for those who scrupled to buy a license.
Lush may be an exaggeration, but the pool yielded enough
to keep Kevin and his ladyfriends mellow and the Iversons'
half-acre of lawn alive and healthy enough to need mowing
in the summer months, a healthful task the Iversons
shared, always bundling up as though lyme tick disease
were still a threat. True, in the fall, some deer
did find their way to the two surviving apple trees.
The two surviving Iversons would watch them
with a sense of proprietary benevolence, as when,
one year, a woodpecker had come to the suet-cage
that dangled from the lowest limb of the Japanese maple.
At such times it seemed that nothing much had changed,
or could.

* * *

Even this long after the fires, Devonia remained
a wasteland. Of the Nyes' home only the raised patio and
the stump of the chimney are still visible
from the jogging path where no one jogs.
The lawn has joined the larger commons, which
briefly served as a campground for foraging
refugees, then for not much longer as an unofficial dump,
and finally as burial ground in the new scattershot
style, not row on row like books on shelves
(anachronisms, now, themselves) but wherever
the dirt most readily gave way to a shovel.
Among the later graves is that of Mariel's granddaughter,
not far from the maple (its roots still extant) where Mariel
buried Dione, the goldfish who died when Mariel
was in fourth grade and in love with a singer famous
at that time.

—Tom Disch

LICENSED TO LENZ 2022
ELECTRONIC REPRODUCTION PROHIBITED

GOLDEN BIRD

Mary Rosenblum

In the nineties, we published twenty-five stories by Mary Rosenblum. The last story to appear in our pages, however, was "The Eye of God" (March 1998). Ms. Rosenblum got busy writing books. She won the Compton Crook Award for Best First Novel, wrote two other SF novels, and then began an ongoing mystery series by "Mary Feeman." After too long an absence, she tells she's finally returned to her roots. The author lives in rural Oregon with big dogs, lots of garden, and assorted livestock. She teaches dog training and cheese-making workshops when she isn't writing.

Estevan got to his feet as the maglev slowed for its transition into the urban heart of the Northwest Strip. A host, striding easily down the wide aisle in his pale-blue-and-navy uniform, chuckled.

"Relax. We're a full twenty minutes out of the Portland station. We're just slowing to city speed."

"Yeah. Sure." Estevan sat back down, his face hot, feeling like the hick the host's crooked smile implied. Across the aisle, a man and a woman in casually bright business tunic-suits stared at the backs of the plush seats in front of them, eyes hidden by the mirrorshade stare of chic VR glasses, fingers twitching on the touchpads in their laps, so identical that Estevan looked away. They were from the Eastcoast Strip, maybe, or Chicago Metro. They had been on the train when he had boarded, on the tiny windswept platform at Rapid City.

He wondered if they had bothered to look out the windows as they raced across the Great Plains Preserve at 240 miles per hour to see the bison and antelope and jack rabbits. . . .

Portland Station. The soft female voice of the intercom murmured intimately from the wall beside his ear. *Transfer here for SeaTac Sector, San Francisco-Jose, and LA-Diego. We will be entering security scanning tunnel in two minutes. Please remain seated and have patience.*

Once again, Estevan clutched the small back pack that was his only lug-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

gage. They were passing through neat rows of crops now. He looked out, identified the green-gold stalks of some kind of grain, but wasn't sure what the green sprawling vine mounds might be. Potatoes? Tomatoes? Some kind of genetically engineered plant yielding drugs or chemicals to make plastic? A small robo-tool crept down the rows, clawed arms scratching around the bases of the viney mounds with a precision that could almost be called tenderness. No city, no buildings anywhere. Just plants.

Darkness swallowed them and Estevan couldn't quite stifle his gasp as the train rolled to a brief halt. In the yellow glow of the cabin lights, the woman business traveler pushed up her VR shades and gave him a brief sympathetic glance. The warmth in those pale blue eyes with the smile lines at the corners startled him. "Relax," she said, eyes crinkling. "It doesn't hurt."

Rays, energies, magnetic fields were scything through the train, imaging everything on glowing screens in some protected room, revealing blood cells, pancreas, bombs, knives, genened bacteria, prying between each molecule of flesh. For a stretching moment, Estevan imagined that he could feel his bones humming like the plucked string of a guitar, when you could no longer hear the note.

"I know," he said belatedly, but the woman had slipped her shades back on, and her fingers crawled once more across the magenta pad in her lap.

Feeling like a hick again, Estevan slumped in his seat as the maglev emerged from the tunnel and eased into the station.

The doors sighed open, admitting the bright October sunlight. Estevan blinked as he stepped out onto a pavement of earthtoned tiles, which washed in gentle curves around islands of fall-bright trees and shrubs. Water murmured and splashed somewhere out of sight. It didn't feel right. Estevan looked up, squinting at the barely discernable shimmer in the blue, cloud-streaked sky.

"It's the new shield technology." A soft voice spoke at his side. "Keeps out the rain and any . . . pollutants. Intentional or otherwise."

Startled, Estevan turned. A petite woman smiled up at him, her hazel eyes sparkling with laughter. She was about his age, Estevan guessed, maybe a little older, mid-twenties, tops. A tracery of gold-fiber inlay glittered on the curve of her cheekbone, a bird of peace shape, he noticed.

"Did you come in from one of the ag-plexes?" Her smile was warm, as if they were old friends, and she leaned close, so that her bare arm brushed against his. "You looked so . . . I don't know. Surprised."

"My father is manager of the Preserve," Estevan stammered. He had never seen a woman so lovely, and wondered for a sinking instant if she was a prostitute. "He works for the UN."

"Ah." She smiled and flecks of gold shimmered in her eyes, bright as the gold filaments woven into her cheek. "That's why I thought you were a foreign tourist, or a plexer. I'm Amie."

"I'm Estevan Baranca," he said, but she was turning away, her eyes already focused elsewhere. "Wait!" He blushed. "I mean . . . can I buy you a coffee? Or something?"

She glanced back at him, amusement dancing golden in her eyes. Smiled. "Thank you." She tucked her arm through his. "I would very much like you to buy me a coffee."

The touch of her arm against his sizzled like electricity this time and Estevan caught his breath, catching a hint of jasmine as she leaned lightly

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

against him. A man dressed in shiny black halted suddenly, a meter away, glaring at Estevan. For an instant, Estevan tensed in alarm, reading attack in the man's posture. Then the man's eyes moved to Amie's face and he hurried quickly on. "What was his problem?" Estevan looked darkly after him.

"He thought you were Chilean." She waved a hand airily and the gold-fiber filigree in her polished nails flashed. "The last incident here was by some Chileans. It's your dark hair."

"I'm Basque." He wanted suddenly to break away from her, to just walk in this strange place until the kaleidoscope of colors and shapes and sounds had sorted themselves into some kind of coherent pattern in his brain. They had reached an arched gateway in an elegant stone wall. Beyond it, bicycles and electric cars streamed down a wide avenue, flanked by a bright tide of pedestrians and bicycle-vendors peddling their small carts of noodles, flowers, and broiled meat on sticks.

"Is someone meeting you?" Amie still had her arm linked through his.

"I'm staying with my sister." He dug in his pack for his sat-link, hiding a pang of worry. What if she wouldn't let him stay? "I should call her. She said she lived close to the terminal." The tiny screen glowed. *Not here right now,* his sister's bright impatient voice sounded in his ear. *Leave a message for me or Jaime.*

"Not home." He pocketed the link, not sure if he was relieved or disappointed.

"Do you know her address? What neighborhood she lives in?"

"She lives at 101 Riverview Plaza. In the Riverside Neighborhood."

Amie shook her head.

"She'll be home later," he said with more assurance than he felt. She had left the Preserve years ago and angry. He hadn't heard from her for a long time. Then she had sent him a book. For his last birthday. A book of poetry, with no card and no return address, just the inscription, *from Magrite*. When he got the scholarship to the university here, he had searched for her on the net, and had found her easily. He wondered once why he hadn't searched for her before. His father had given him money to pay for a hostel here. He had taken it, but he had felt guilty for his deception.

"I'm on my way to a party." Amie twined her fingers through his, the gold in her eyes sparkling in the yellow light of the sinking sun. "Come with me! You can call your sister later. It'll be fun. The party's at Phillipe's. All kinds of cool people hang out at Phillippe's parties."

They were walking down the broad pedestrian way now, past the fronts of restaurants, clothing shops, markets, and salons. Balconies opened to the street from the upstairs apartments, and music with a lilting Caribbean beat wafted from a pair of open French doors. Crazy, he thought. Find Magrite's place. But Magrite might not be happy to see him, and Amie's scent made him dizzy. "Sure," he heard himself saying. "Why not?"

They reached the end of the block. Across the street, a broad strip of park divided the pastel rows of houses and shops from more houses and shops and avenues on the far side. The hair on the back of Estevan's neck stirred. This was a Boundary Park, dividing the neighborhood from the adjoining one. If needed, a neighborhood could be quarantined, shut off from the surrounding streets. He picked out the tall black wands of the energy fence, hidden by greenery. It wasn't on now. You could stroll there. Late pears hung

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

yellow on small arched trees, and red berries sparkled like rubies on shrubs whose leaves had turned to gold in the fall air.

"Tell me about the Preserve." Amie tugged him across the street and onto one of the flagged pathways that meandered through the park. "What is it like to live out in the middle of nowhere?" She shivered delicately, and laughed. "I would go crazy, I think. Or do you talk to the buffalo?"

"It's beautiful." The words burst from him, releasing a wave of homesickness that made his stomach knot. "The grass is gold, this time of year. Like ocean waves. It goes on forever, and the bison look like brown islands, or maybe whales. At night, the wolves howl and it's like hearing moonlight. . . . " He stopped, embarrassed by her shining eyes. "And I'm not lonely. . . . " He stammered now, his face hot. "There's the Net. I visited London and New York, and all kinds of places in the East Coast Strip, and out here. All by VR, but that's almost like being there." He sounded like a commercial for expensive video toys and she was laughing at him now, her eyes sparking with gold. "I'll show you!" They had reached a small plaza surrounded by restaurants with umbrella-shaded tables out front and a shop selling electric bicycles and fanciful kites. A public VR booth stood at one side, flanked by tubs of blooming flowers.

Estevan pulled her over to a double booth, and handed her a pair of gloves and shades, slipping his card into the slot and touching in the code he wanted.

He had memorized it yesterday.

The walls shimmered and dissolved, and suddenly they were standing at the edge of Big Grass Prairie. It was spring. Flowers sprinkled the lush green shoots of new grass, and a lark clung to a stem, swaying in the breeze as it sang its life song. A breeze caressed their arms and Estevan felt his skin ridging at its cool touch. He could smell the moist earth, just warming to the sun's kiss. A doe antelope raised her head, white stripes shining on her chestnut face and neck, her ears wary.

"That's Reba," he said. "I worked for the crew who recorded this. She's really old for an antelope, and she's not scared of me any more. She had twins this year. I saw her run off a coyote who tried to take one. I sneaked up to watch them once. It took me three hours," he said proudly. "I didn't scare them. She saw me, and all she did was snort." The antelope tossed her head, and spun to bound away, white flashing as she leaped through the young grass.

"It's beautiful," Amie breathed. "I . . . I've never visited the Preserve. It's so huge. I never really thought it would be beautiful. Just big empty space with no buildings and no people."

Estevan bent down, longing to pick one of the blue lupines blooming at his feet. The artists had strolled for days through the Big Grass, recording every detail of sight and sound and scent.

"You love it," she said, no longer in the scene, her voice coming soft from the prairie air.

"Yeah, I do." He took off his shades. Grass and antelope vanished to become the matte ivory walls of the booth's interior.

"And it makes you sad." Amie was looking up at him, the gold in her eyes muted and dark as amber. "Why?

"I don't want to be a UN manager," he said slowly, "but I can't live there and be anything else."

She opened her mouth to speak, but suddenly light flashed brightly in the booth, a chime sounded and they both started.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

An incident is in progress, a young androgynous voice seemed to come from everywhere and nowhere. *An incident is in progress. The Avalon neighborhood is closed. Please choose alternate routes.*

Amie bolted from the booth. "Kallie!" she cried, as he caught up with her outside. She stood starkly erect, hands at her mouth. "That's Kallie's neighborhood," she whispered.

Not here, then. Not here. Fear that Estevan hadn't anticipated relaxed its grip on his gut. He found himself searching for the black wands in the boundary park, half expecting so see the shimmer of a deadly fence dancing between them. Towhees scratched and fluttered in the grass. "Your friend's probably all right." Germs? Toxins? Estevan's arm went around Amie without thought, and he pulled her close. He'd seen it on the news, knew about this. . . . "She's probably fine," he whispered, holding Amie close. She was trembling slightly, a fine tremor that seemed to come from the marrow of her bones. "Maybe she wasn't even in the neighborhood—was out shopping or something. Maybe it's a false alarm."

Amie buried her face against his chest, drew a long, shuddering breath. "She's there," she whispered. "They don't announce false alarms." She sobbed once.

Around them, people were going about their business. Two women walked by, the taller one holding the hand of a small, dark-skinned girl. All three of them nibbled at cones of shaved ice and fruit. A man was haggling over a bicycle with the shop owner. Estevan felt dazed. People might be dying a few blocks away, and these people ate ices. For a moment, he was seized with the longing to walk back down the block to the terminal, buy a ticket, and board the next maglev heading east. "I'm so sorry," he said, stroking Amie's shining hair. It smelled of jasmine and summer. "I'm so sorry."

She looked up suddenly, her eyes empty of gold, took his face between her palms, and kissed him on the mouth. For an instant he stood still, struck with surprise. Then he responded, his mouth opening to her insistent tongue, the small plaza dissolving around him. Finally, she pulled slightly away from him, her face flushed, and laid her head against his chest.

"You are so innocent," she murmured, her lips against his tunic. "Why did you leave the prairie?"

"Because I got a scholarship," he said, not sure he was answering her question, but knowing no other answer. "My genetic rating is up in the high nineties in tech-related categories. So the university offered me an on-site scholarship in bio-engineering." She had stopped trembling, but now a final shudder racked her. "Can I take you somewhere?" he asked awkwardly. "Do you want to call your friend?"

"No." Amie straightened, shaking off her dark mood. "There's nothing I can do." Her smile was bright, but the gold was still absent from her eyes. "I want that coffee you promised. There's a cart in the next neighborhood run by this old Italian man. He roasts his own beans and presses great espresso. Then we can go to Phillipe's party. It'll be late enough by then."

She tugged him along, past more shops, and balconies filled with plants and personal solar panels, and music. Her voice bright, she told him about the Bridge Festival in the spring, when traffic was halted on most of the bridges so that strolling pedestrians could visit the shops and restaurants and enjoy the view of the water uninterrupted by cars and bicycles. She didn't mention Kallie again. As they sipped foamy cappuccinos made from fragrant, freshly ground coffee-pods, she asked him about the Preserve. He for-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

got his cooling coffee as he described the prairie sea that rolled on beyond all horizon, and the purple mountains rising in the faraway distance. He told her about the winter winds and the howl of the wolf packs that balanced their lives with those of the antelope and mule deer and bison.

He told her about coming upon four wolves killing an aging bull bison one freezing, full-moon night, and how the bull's hoarse panting, the thud of its hooves, and the wolves' low excited cries as they darted in to tear at the animal's legs and flanks were the only sounds on the frosty air. One wolf had been killed and it lay on the churned snow and soil, its fur dark with blood where the bull had kicked it.

He ran out of words, finally, and realized with a start that it was nearly dark. The sun had set and lights had come on, huge yellow globes glowing on gracefully carved pillars. The foam had congealed around the rim of his cold cup, and Amie's eyes were fixed on his face, rich with gold once more. "I should call my sister," he said.

"No. Don't." Amie rose, tugging him to his feet. "She'll be home and full of welcome, and you'll feel all obligated to go straight there. Is she really expecting you right now, today?" Mischief danced in her eyes, and she nodded decisively as Estevan slowly shook his head.

"I didn't think so. So we'll party first, and you can call her later." She tugged him toward the main thoroughfare at the end of the block. "Never mind Phillipe. He's boring. We'll drop in on Sam Pai. He has people there every night, and a lot of them are artists. It's a great place to go. His thing is classical Chinese cooking. Better than the best restaurants." She lifted her hand and waved as they reached the curb. An electric rickshaw driven by a young girl with purple hair and matching tattoos pulled over instantly.

The city came to life with the onset of night. Light spilled from the upstairs lofts and the air was thick with gusts of music and scents of cooking food. Estevan stared at the brightly dressed people on the streets, who strolled, laughed, and crowded the doorways of popular restaurants and bars. "Look up there," Amie said, head tilting so that her hair fell back from her fine-boned face. A tall building, frighteningly tall, soared a full ten stories above them. Laughter and light spilled from a wide balcony on the top floor. "Let's go there," she said and pulled him through the glass doors. They took an elevator lined with mirrors so that multiple reflections of Amie smiled at him.

The party was in the top-floor loft, a corner space whose two window-walls offered a sweeping view of the river and the light-spangled park along the wide watery darkness. Amie smiled and waved as they came through the door, everyone's friend. She twirled Estevan through the crowd of fashionably dressed young men and women, mostly Asian and Hispanic, who said polite things to him and smiled brightly and fondly at Amie. Estevan lost her after a bit, left behind as she darted like a bright fish through the throng. Alone, a true foreigner among the flushed faces and sleek clothes, he let the window pull him, losing himself in the panorama of lights and darkness, a glass of red wine that he didn't remember accepting clutched in one hand. The city lay spread out below, a quilt of green, gold, and red light, carved into irregular blocks by the Boundary Parks. A feeling like hunger stirred in Estevan's belly.

A woman with very dark skin and Asian eyes wandered over dressed in an olive body suit embroidered with shimmering light fibers. "You're new," she said crisply, with a startling New York accent. "Do I know you?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"I . . . I came with Amie." Estevan felt his face heating, as if he'd been caught trespassing. "She's a friend of Sam Pai's."

"Never heard of him." The woman ran a finger along his jaw, emerald chips glinting in her pearl-colored nails. "But you're cute. You can stay. What do you do?"

"I'm in the university's on-site program. Bio-engineering," he said. Up here, with the city spread below him, the words had power. As if he'd opened a door to see his future already certain and completed.

"I'm impressed." The olive-suited woman selected a small morsel of cheese topped with pomegranate seeds from a lacquer ware tray on a nearby table. "Welcome to our fair city, bio-engineer-to-be." She popped the bit of sweet cheese into his mouth and brushed her long polished nails lightly across his lips. "You're welcome to my parties any time—with or without your gilded bird." She smiled, more emeralds sparkling in her perfect teeth, and slipped away into the throng. Estevan looked after her, breathless, the sweet tart taste of pomegranate on his tongue.

"This is boring, isn't it?" Amie appeared by his side, her eyes as bright as the gold inlay on her cheek. "Shall we go?"

"This isn't Sam Pai's party."

"Of course not." She shrugged, arm twining through his, guiding him through the aisle that opened magically before her. "This looked like fun, that's all. It isn't. I don't want to stay anymore."

Her mood had shifted and Estevan didn't know why. She walked quickly, as if to an important destination, and he had to stretch his legs to keep pace with her. The streets were still full of people, and the spill of light dimmed the stars overhead until Estevan could barely make out the constellations. Orion would be up later, peeking over the horizon on the first steps of his winter journey across the sky. Panic squeezed him again, briefly, at the thought that he might not be able to see the Hunter's jeweled belt.

Amie's fingers dug briefly into his arm. "I'm hungry," she said. "They do good Syrian here." She pulled him into the tiled and arched entry to one of the shops that lined the wide thoroughfare. They were down near the river here, and Estevan smelled water and green things mixed with the scents of cumin and roasting meat drifting from the little restaurant.

Inside, a small woman with tawny skin, wide cheekbones, and very dark eyes greeted them from behind a carved teak counter, bowing her head gracefully to Amie. A dozen couples sat at small tables lit by tiny oil lamps. "What would you care for?" she asked them gravely.

"*Talamee,*" Amie said briskly. "*Kibbe* with *laban* and dates. To go."

The woman smiled at her, nodding, then turned to shout harsh orders back toward the kitchen before ushering them to a pair of carved wooden chairs with red brocade cushions beside the door. Amie stared through the window as they waited for the food and Estevan found himself afraid to disturb her, wondering if it was time to call his sister. He didn't want to call. Before he could make up his mind, a perspiring man with a thick moustache and graying hair hurried from the kitchen, a stack of white take-out containers in his hands.

"*Kibbe* and *laban.*" He set the top container on the little teak desk while the woman smiled. "Very good *kibbe*. The best. *Talamee*. Dates. And this." He produced a dark green bottle from beneath the desk. "For you." He bowed to Amie. "A gift." He produced a plastic shopping bag and with a flourish

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

packed food containers and wine into it, adding glasses that were made of biodegradable plastic and sparkled like crystal.

"Thank you." Amie's golden-traced smile brightened the room. "I love your *kibbe*."

Estevan pulled out his cash card, but the man was shaking his head vigorously, scowling as if offended. Waving at him as if he were a pesky fly, he said something briskly in a language that Estevan didn't understand.

"Here." Amie thrust the stack of containers at him. "You take this. I'll carry the wine."

"Why didn't he let us pay?" Estevan followed her out of the restaurant, noticing from the corner of his eye that two or three of the couples had turned to steal surreptitious glances at them. "You're some kind of celebrity, aren't you?"

"Something like that." She laughed lightly, a golden sound. "Let's go out on the river."

The street ended at a wide esplanade of grass and paths paved in brick. Gentle stairs led down to a landing where a dozen boats bobbed, tethered to a fake metallic rail. The river rolled serenely beneath the dim stars and the city blazed on both sides, reflected in the liquid shimmer of black water. Amie gestured him into the first boat in the line, then handed the bag of food down to him. Estevan settled himself onto a padded seat, looking around for an attendant, but Amie stepped over to a gray plastic box mounted on a thick pedestal and placed her palm against the blank face of a scanner. With a quiet click, the tether released from the bow of the boat and Estevan felt it hum to life beneath his feet.

"Let's go." Amie jumped down beside him, making the boat rock wildly, and wringing a gasp from him. "Don't worry." That mischief danced in her eyes again. "It won't tip over no matter what we try. Want me to show you?"

"No. Thanks." Estevan caught her as she leaped, light-footed, onto the gunwale. He pulled her down beside him on the plush and brocaded bench seat. "I want to go out in the middle."

"Cruise river middle very slow no destination." Amie enunciated the words carefully.

The boat slid smoothly away from the dock and the voice of the city faded, replaced by the slap of water against the plasteel hull of the boat. It was designed for tourist cruises, Estevan decided. A wide sofa filled the rear, with comfortable and cushioned chairs forward and a polished fake-wood table in the center. Amie was laying out the containers, stripping off their plastic lids, and twisting the plastic cork out of the bottle. She set out the fake crystal glasses that caught the rainbow glitter of the city light and spangled it across the thick red wine as she poured it. "To you," she said, handing him a glass.

The wine filled his head with the scent of pine trees and a sudden yearning seized his chest and stopped his breath for an instant. He lifted the glass so that the city gleamed ruby through it, drank and felt the wine rise to his head, making him instantly dizzy. They ate the food—thick rounds of warm bread and small footballs of ground meat and grain that tasted of cinnamon, sauced with yogurt and mint. It was strange and wonderful and it made him as drunk as the wine. Amie filled their glasses again, and this time he touched the lip of his plastic glass to hers.

"To you," he said thickly.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"To jealousy." The tap from her glass sloshed blood-colored wine onto the front of his shirt.

"Jealousy?" He blinked at her. "I'm not jealous."

"I am." She drank, tilting the glass back, the white curve of her throat pulsing with her swallows as she emptied it. "Drink it," she commanded, and when he had, she took the glass from him and tossed them both into the black satin of the river-scented darkness. He heard the tiny twin splashes of their landing, then she had his hands, was pulling him to his feet.

"I am jealous of your Preserve," she breathed into his ear, her lips brushing his jaw. "Because you love it more than the city, and I am the city."

"I don't. . . ."

"You love it more than me, and you'll go back. I want you to love me more." City light gleamed in her eyes and the gold flamed on her cheek as her lips on his silenced him. The sofa in the rear of the boat had unfolded into a wide bed and he gave this transformation no thought, none whatsoever.

They made love, and made love again, and again, fiercely and passionately at first, then slowly and languorously, exploring the small mysteries of each other's bodies. At last they lay still, entwined, with her head on his shoulder. Overhead, Orion hung pale and ethereal, veiled by city light.

It was the bump of the boat against something solid that jolted him from a waking dream of stars and sweat-slick skin and Preserve grass. He looked up and recognized the dock, groped in small panic for his clothes, and heard Amie's soft chuckle as he pulled his tunic over his head.

"Relax," she said. "You're quite lovely. You'll only add to someone's evening stroll."

"I fell asleep." He reached for her hand, and she squeezed his fingers, hard.

"We need to find your sister's place," she said, and he thought he heard a note of sadness in her tone.

"I don't have to . . . not tonight." The words were lame and he winced at their lameness even as she shook her head. Her hair glittered silver in the urban light.

"Yes, you do," she said, and that was all.

She hailed another rickshaw that appeared almost magically out of the shadows as they reached the top of the stairs that led up from the dock, and gave his sister's address to the driver with perfect accuracy. This time it was a man with a fiber-art tapestry glowing on his naked chest. "I want to stay with you," Estevan said as they rickshaw whirled through the streets that were even more crowded now than before. "I just . . . want to stay."

"I know." Amie still held his hand, but she wouldn't look at him.

"Why can't I?" Fear seized him. "There's someone else."

The look she turned on him was depthless and unreadable. "Yes," she said softly. "There is always someone else."

Then they were there, pulling up in front of a pale, three-story apartment building. Carved roses and foliage garlanded the white cultured marble, draping the windows and balconies and flowing down around the shallow steps to the sidewalk level. The cabby didn't ask for payment, merely darted away into traffic as soon as they were on the pavement.

"You knew where she lived all along." It wasn't an accusation. Just a statement. Amie shrugged and didn't answer, slipping her arm through his as they climbed the polished marble steps together.

A part of Estevan wanted to throw off her arm, to shout at her, why did

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

you do this to me? But he clung to it instead, his insides roiling as they entered the narrow vestibule.

He found Magrite's name carved on a jade lozenge beside the elevator. Touched it. A rectangle in the marble-sheathed wall shimmered and became a screen. "'Bout time you made it, Kiro, I . . ." Magrite's face stilled and for an instant silence filled the small vestibule.

"Hi, Sis." Estevan cleared his throat. Buzzed hair. Red light-fiber traceries across her scalp like brocade beneath the fuzz. Older. A lot older. "It's me. Estevan."

"I know." Her face looked like an animation of a human face, all emotion absent, a holographic model for a light-fiber tattoo parlor. "What are you doing here?"

"I got an on-site scholarship. To the university."

"Dad's not dead then?"

"No." He watched the animation-face soften, shimmer into human life.

"Jeeze, kid, come in. I can't believe it." She turned away from her vid-eye, giving him the flat curve of her cheek. "It's Estevan," she yelled to someone in the background. "My baby brother, can you believe it? Come in." She grinned at him now, dark eyes laughing, not so old, not so strange for all the fiber-art and the buzz. "I'll send the 'vator down."

"I should go."

"No." Estevan caught her as Amie started for the street door. "Why not stay? Please?" An urgency that should have embarrassed him colored his tone. He clung to her hand and didn't care.

"All right." She sounded tired, let him tug her into the opening elevator. He kept Amie's hand in his, even when she tried to withdraw it. When the doors opened, it was into Magrite's living room. A half dozen people lounged on floor pillows beneath huge screens of slowly shifting video art. A low flute melody threaded the rambling conversation, suddenly louder as that conversation faded. Feeling the eyes, Estevan stepped onto the antique oriental carpet, pulling a reluctant Amie with him.

"Bigsis." His baby name for her. It was she. It was Magrite. He stepped into her suddenly open arms, throat tight, shocked even as he hugged her to find her so small, himself so tall.

"This is Jaime. My partner." Magrite, arm still around him, was waving a lanky redhead with green eyes and white skin closer.

"Nice to meet ya," Jaime drawled, south or southwest in her words, Estevan couldn't tell.

"And this is Amie. I met her in the square today." He turned to her, held out a hand. "She showed me the city." He smiled at her, received her smile.

"Welcome. Come on in. A few friends came by. Nothing wonderful."

The sudden coolness in her tone brought Estevan around to face her but she smiled and her dark eyes sparked with the warmth he remembered. "Baby brother," she said. "All grown up." And threw her head back to laugh.

She did introductions, swept everyone to the kitchen bar where Jaime refreshed drinks, poured Estevan and Amie blackberry spiked champagne and handed around plates of olives and small spicy sausages. Magrite asked about the Preserve and his studies and didn't ask about Dad at all, and her friends asked, too, and when Estevan finally realized that Amie had vanished, it was too late. He didn't have a last name or an address or any way to reach her again. He went down to the vestibule, but the street was empty as far as he could see.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Never mind." Magrite's voice behind him made him start.

"I can't never mind." The champagne, on top of the pine-tasting wine, slurred his words. "I love her."

Magrite took his hand. "Baby brother," she said, her voice rough with a tenderness that had vanished from her long before she had vanished from his life. "Come upstairs and I'll tell you about how safe we all are here, and why. Come upstairs and get drunk with us."

The October sun climbed slowly above the shoulder of Mount Hood as the maglev slid silently to a stop in the plaza. Only a handful of people waited for this early run on the earthtoned tiles, their wan autumn shadows streaming long behind them. Estevan leaned against the low stone wall of the fountain, bleary, a headache from too much of his sister's champagne pulsing at the base of his skull, wincing at the light.

She wasn't there.

Relief pierced him and the strength of it made him groan. Magrite was wrong. He turned to leave.

A slight figure detached itself from an artful composition of red willow and native *mahonia* and hurried after a young woman striding across the tiles with a real-leather bag slung over one sturdy shoulder. Relief turned to a stone of nausea in his belly as Estevan watched Amie overtake the stranger, tap her on the shoulder. The stranger stopped with a frown, her fashionable spike glittering with woven silver in the harsh light, but her frown faded, replaced by a resigned smile as she looked down at the gesturing Amie. They strolled side by side then, and Estevan realized they would pass within two meters of where he stood. A panicked urge to hide seized him, but he couldn't move, could only stare as the two women approached.

". . . saw your name on the arrival list, and I recognized it right away. Benjamin and I shared an apartment for . . . oh . . . six months. He talked about you all the time." Amie was holding the woman's hand. "How amazing to run into you. What a coincidence." Her face was turned up to the red-haired woman and the gold fibers on her cheek glittered in the sun. "Tell him hello for me."

"I will." The woman halted, her expression patient now. "Did you get what you need?"

"Oh yes. Thank you and have a nice day." Amie let go of her hand and stepped back, her smile as golden as the morning sun.

The red-haired woman nodded then, and disappeared through the gateway that led out onto the broad street. Estevan lurched to his feet and took a stiff step toward Amie. She turned to face him and her eyes were full of shadows.

"I told her she was wrong." He blurted the words out. "Canary."

"I am." Amie stepped close, ignored his involuntary flinch as she reached up to put her hands lightly on his shoulders. "Is that such a terrible thing?"

"You let them change you. *Alter* you."

She tilted her head, her eyes holding his even though he desperately wanted to look away. Her expression was quizzical and sad. Shaking her head, she took him by the hand. His fingers closed around hers even as he willed himself to snatch them away, turn on his heel, and walk away. Instead, he let her lead him across the tiled terminal to a cluster of wrought iron tables set amidst pots of fountaining grasses. Their heavy cream-colored seed heads rustled in the gentle morning breeze as she sat down in one

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

of the chairs and pulled him down beside her. A waiter passing by caught her nod and brought the two lattes she ordered from him.

He didn't ask for money, of course.

Amie lifted the tall ceramic tumbler and sipped at the thick foam on top, licking the white traces from her upper lip. Estevan looked away, his heart a clenched fist in his chest.

"Someone has to do it," she said, and her tone was so matter of fact that he wanted to scream. "It's the only sure way to tell. If someone is a carrier, by the time the first people get sick, it's too late. If we know right away . . . we can contain it. I'm monitored all the time."

He stared at the foam on his cooling coffee, wondering what had registered on those monitors as they made love.

"I ordered this coffee," she said softly. "Later, I'll eat Thai noodles in a very nice restaurant, or maybe fresh crab from a cart. I'll wander into a few interesting parties this evening and meet new people. It's a slow day. There's not a lot of travel in the middle of the week so there aren't a lot of newcomers to greet. I grew up with nothing, Estevan. I was on federal minimum subsidy. Do you have any idea what that's like?"

A thread of anger in her tone made him look at her at last. The gold had vanished from her eyes, leaving them a flat brown. "No," he whispered.

"It is not nice. They don't want it to be nice. I stood outside the window of your comfortable world and I looked in. I wanted to live there." Her voice trembled slightly, but she smiled. "Now, I do, Estevan. And everybody loves me."

"Because you'll die."

"Not necessarily." She shrugged one slender shoulder, dipped foam from her coffee, and licked it from her fingertip. "Only if it's something they can't cure. There's a new antibiotic out just last week."

"Your friend." He struggled to sit up straight, the pounding in his head nearly blinding him. "Yesterday. You said she'd be there. In the neighborhood that was . . . quarantined. Did she die?"

"Yes." The bird-of-peace shape in her cheek seemed to dim briefly. Amie stirred the foam once more, white froth coating her polished nail. "An irony," she said. "She wasn't even working. She was just . . . a bystander."

He had never been hungry. Estevan stared through the entry, just barely able to make out the wooded pedestrian strip that hid the deadly poles of the quarantine fence. He had never wanted things that he couldn't have. His sister had, he realized suddenly. And she had left. What would it mean to a young girl—clothes, jewelry . . . love? A small price. He bent his head. "I thought you meant it," he whispered and he sounded, even to himself, like a child. "That's all."

She came around the table to him, lifting his face with both hands so that he had to meet her hazel eyes. "You just watched me check that woman," she said harshly. "All I have to do is speak to you. Touch you. She knew what I was doing. She used to live here, is the sister of an old friend. She worked in China for the last three years, so she's on the high-risk list."

As was he. What had she asked him when they first met? If he was a foreign tourist. "Because I'm a Basque citizen," he said slowly. "Not American. I thought you were a prostitute when you first stopped me." He made the words brutal but the deep flicker of pain in her eyes filled him with shame. "I'm sorry," he whispered.

"I touched your hand. I spoke to you. That was all I needed to do. But you

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

were so . . . sweet. You didn't know." Amie caught her breath, the gold wakening deep in her eyes. She slipped a hand into a pocket in her tunic. "I knew she'd tell you. I knew you'd come here this morning." She reached for his hand, laid a small chip-card on his palm. "This is a ticket. Back to the Preserve. Go back, Estevan," she said harshly. "You don't belong here. You'll change if you stay here."

"Come with me." He stood, caught her wrist, holding her as she tried to pull away. "You'll be safe there. Even if you catch things easily, there, you hardly see anyone in the flesh. Just animals. Animals can't hurt you, can they?" His face felt hot and he was breathing hard, as if he'd been running. "Please?"

"You don't understand." She stood still, no longer trying to free her wrist. "I *am* the city. I told you last night. I meant it. Everything I said." Gold blazed in her eyes and on her cheek. "No. I won't go with you."

He let his hand fall to his side, watched her walk away, her heeled boots tapping on the tiles. Travel was slow in the middle of the week. She didn't need to stay here to meet the next passenger with a high-risk profile, touch him or her on the arm, turn her flawless face up to inhale that exhaled breath that might be death. He wondered through the dull ache in his skull if they had made her flawless when they had re-twisted her DNA, had given her a face to win that smile and breath from every passenger, male or female?

Why not?

Estevan got heavily to his feet and crossed the plaza to where the maglev waited. A small screen set into a mosaic-tiled pillar confirmed that, in ten minutes, this train would leave the platform and whisper its way east, across the Cascades and on across the Rockies that jutted through the grasslands of the Preserve. He turned the card over between his fingers. He had his passport with him. The doors whispered open as he approached, and he peered into the empty car. No takers at this middle-of-the-week hour. Step into the car, slip the card into the reader-slot, and sit down.

A musical note sounded and the door whispered closed again. *Departure in five minutes and thirty-five seconds,* a woman's voice murmured from hidden speakers. *All passengers should board immediately. Departure in four minutes and ten seconds. . . .*

He listened to the train-voice count down the seconds, watched it whisper away, sliding through the plaza, gathering speed as it left the terminal. Bioengineer. That was what his genes promised he'd be good at. That was why he had been selected for on-site study.

"I *will* be good at it," he said, and a man in a business tunic passing by gave him a curious look. Someone else had been good at it, Estevan thought, and they had made . . . Amie. He turned his back on the tall mountains to the east, and on the distant, grassy sea of the Preserve. It occurred to him that he would never walk in that grass again. It occurred to him that he would see Amie here again, eating noodles at a vendor's cart, or at a party.

"You're wrong," he said softly. "It's too late." He dropped the card onto an empty table and left the plaza, walking back through the morning city to his sister's apartment, crossing the invisible and landscaped boundaries of the city neighborhoods to reach it. ❍

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ETIQUETTE WITH YOUR ROBOT WIFE

Never tell her she tastes like metal.

Do not introduce her as "my robot wife."

If you find a strange metal thingamajig on the carpet, don't hold it up and exclaim: "Where did this thingamajig come from?"

Let her order whatever she wants even though she can't eat it.

Lose the refrigerator magnets.

Agree with her when she insists that even robots can feel tired and get headaches.

Spare parts!

—**Bruce Boston**

Illustration by June Levine

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

THE ICE

Steven Popkes

Steven Popkes has published two novels and several short stories, a number of which have appeared in *Asimov's*. At various times in his life he has been a white water-rafting guide, a construction worker, a neurological researcher, and a software engineer. He's now a father, which, he tells us, "is much harder than anything I've ever done before." At the moment, Mr. Popkes is learning to be a pilot, and works for a company that builds aviation instrumentation.

NetBio, April 26, 2017
Howe, Gordie
(Gordon Howe), 1928–, Canadian hockey player. Possibly the greatest and most durable forward in the history of hockey, he played (1946–71) for the Detroit Red Wings of the National Hockey League (NHL). With his two sons he joined (1973) the Houston Aeros and then (1977) the New England Whalers of the World Hockey Association, ending his career in 1980 with the Hartford Whalers of the NHL. Howe's NHL career records include most seasons (26) and most games (1,767); his career record for most goals (801) was broken by Wayne Gretzky in 1994.

Act I

It is late April at the end of the hockey season. Play-offs start in two weeks. Phil Berger is thinking about practice, college, and his girlfriend Roxanne, all at the same time. Earlier in the week, Colby and Dartmouth had both sent him letters about a hockey scholarship. He would have preferred a better school with a better team—like Boston University. But BU hadn't shown much interest in him, though he'd seen one of their scouts at a game three weeks back. Phil chides himself. Don't get your hopes up. There are a lot of guys playing hockey these days.

The house is dark, but his mother's car is in the driveway. The moon mingles the Victorian architecture and shadows of the trees. The result makes

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

him uneasy. There is just enough light for him to find the front door key. Once inside, he turns on the hall light.

Silence.

He can hear breathing in the front room. He walks to the door. The light is behind him and he cannot see anyone. "Mom?" he calls.

The light comes on in the room, and Carol Berger, his mother, pulls her hand away from the lamp.

She hands him a flimsy. Its active surface shows the sports page of the *Middlesex News*. Phil recognizes Frank Hammett's byline from previous articles. His mother keeps a scrapbook of every article Phil has ever been in. Phil's picture leads the text of the article. The headline leaps out at him:

"Clone of Gordie Howe Playing for Hopkinton Hillers."

Phil chuckles. What a joker. He shakes his head at the thought of it. Phil's good. But he's no Gordie Howe.

"Is this the problem?" He holds up the paper. "April Fool's is a little late this year."

"You were an in vitro baby," his mother says slowly.

"What?"

"From neither of us. My eggs were . . . unusable, and your father has the genes for Lou Gherig's Disease. He didn't want to saddle any child with that. The embryo was donated. We didn't know the parents." She rubs her face in her hands. "We only knew the procedure was subsidized by a rich benefactor." She looks at him. "We had given up. We didn't have the money. We were living in New Hampshire, and fertility procedures weren't covered by insurance. We wanted a baby."

He shakes his head. "So what? It still can't be true."

She shrugs. "I don't know. All I know is, I got a call from two lawyers, one offering to represent us in suing Gordie Howe for compensation and one representing Gordie Howe warning us off. Dr. Robinson called me, too."

"Robinson?"

"The obstetrician who implanted the embryo."

"What did Dr. Robinson say?"

"He said he'd been approached by Frank Hammett with some documentation on the 'irregularities in the implantation procedure.'" She raises a hand and lets it fall in her lap. "'Irregularities.'"

Phil tries to make sense out of what his mother is saying.

She stares out the window. "Somebody is taking Hammett's article seriously."

More lawyers, publicists, and reporters call in the next week. In Massachusetts, hockey is loved as no other sport. All of Hopkinton is excited at the idea that there might be a budding Gordie Howe in their midst.

Phil's father, Jake, insists visuals be completely turned off and the audio filtered. He refuses to return calls. Jake has spent his life trying to live correctly, to provide for his son and his wife. He works hard managing the plastics factory near the house, and when he comes home, he leaves technology behind. The Berger house is over a hundred years old and has only the minimum data feeds. Phil has always had to go to the houses of friends for immersion games or wide feeds. Jake spends most of his spare time in the summer working in his garden. In the winter, he spends it in his greenhouse.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Phil doesn't know what to do with his father. Jake won't meet his eyes. Jake avoids Phil, even though the house is too small for that. Normally, Jake would be clearing the garden, readying it for the coming spring. It's a cold April and Phil is worried about him. Jake takes to sitting in the greenhouse, staring out the window. The honey berries will go unharvested. Phil wants to call Roxanne and talk about it, but she is learning French in France for the month and he doesn't feel like calling overseas.

Besides, he tells himself, he doesn't really believe it. He thinks this is some strange hoax being played out. He reads up on hockey history and wonders what it would be like to be Gordie Howe.

Response to Hammett's article forcibly occupies the discussion sections of the local feeds all that week. By Sunday, the tone of the conversation has changed from questioning the ethics of a Gordie Howe clone playing against normal players to how dare Frank Hammett perpetuate such an obvious lie. It does not make any of the regional or national news feeds. Phil is relieved. Nothing is real until it hits the big feeds. Hammett is strangely silent and unavailable for comment. There is speculation that he is being closely questioned on verification of his sources. Hammett's ambition to be a reporter for the *Globe* feed is discussed. The old Mike Barnicle scandal is brought up, and one editorial concludes that Hammett will be similarly fired. It looks as if the spotlight has moved from Phil back onto Hammett. Phil is just as glad.

The following Monday night, the Hillers play their next game in Leominster against the Blue Devils. Hammett's article has had visible effect: the place is mobbed. Phil can't get in. A lawyer named Dalton threatens him with an injunction and says that he represents Gordie Howe. Unsure of what to do, Jake and Phil back away and leave the rink. However, they park on an adjacent street and sneak in through the back entrance. Neither Phil nor the rest of the team can concentrate on the game. The Hillers founder and lose, four to two.

After the game, cars follow Jake and Phil. Jake takes to the backroads and eventually loses them. Phil wonders who they are. All he saw were people in windbreakers and ski-jackets, wool coats with gloves—their faces could have been anyone's faces.

When Jake and Phil come in the door, Carol hands them a flimsy of the Boston *Globe*. The lead article, by Frank Hammett and Carl Weatherspoon, is about the "Gordie Howe Clone." The article continues, occupying most of the flimsy with a host of associated links. There are several pictures of DNA chromatographs and chromosomes, documenting the similarities between the Howe genotype and that of Phil Berger.

Phil feels as if the world has entered into some long, horrible tunnel. He shakes his head and stares at the pictures. This is his life on display without his permission. No. It's more than that. He feels naked before strangers. He feels shame without knowing why.

He looks up at his parents. "How did they get this stuff? Don't they have to . . . to ask permission or something? Don't I have to sign a waiver? Don't *you* have to sign a waiver?"

Jake shrugs. "I don't know, son."

The doorbell rings. Outside are four men.

"Shit," says Jake.

Phil has never heard his father swear.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

In the hallway, Jake turns to Phil. "Phil, this is Dr. Sam Robinson. Your mother told you about him. I'm not sure who the other people are."

Phil recognizes Dalton from the rink. The next two men enter. One is introduced as Dr. Murray Howe, Gordie Howe's son. Phil needs no introduction to the last man; it's Gordie Howe himself.

Phil is a big boy. He stands over six feet tall and weighs in at one ninety. He knows he is big; he likes the comfortable feeling it gives him when he walks through a crowd. He likes his own height and heft. When Howe walks in the house and they face one another, Phil suddenly knows it's true. Howe is pushing ninety, and has shrunk as old men do. Age and punishment have changed Howe but even allowing for that, Phil doesn't exactly have Howe's face. It's Howe's body that convinces him. Young Gordie Howe shows through his carriage, his battered knees and ankles, his hands as they hang relaxed and ready from the elbow.

Howe's eyes measure him in return. Phil can see that Howe is convinced as well.

"Did you do it?" Phil asks.

Howe shakes his head. "I have three sons already. I don't need any more." He leans his head to one side and looks at Phil critically. "Are you going to claim I'm your father?"

Phil shakes his head in return. "I have a father. I don't need two."

The meeting is concluded as far as the two of them are concerned, but they still have to wait for the others. They all sit down in the living room. Howe says very little. Phil and Howe's attention are on each other.

Robinson explains what has happened. "In 1997, we were approached by the firm Meel and Weed from Detroit. Meel and Weed represented a couple that had been killed in an automobile accident with their embryos still in storage. The common practice at that time was to freeze extra embryos for possible later use or research. The parents of the deceased couple wished to allow the embryos to be used by infertile couples in their children's memory. All of the participants were to remain anonymous." Robinson removes his glasses and rubs his nose. "This was not uncommon then and is not uncommon now. In addition, Meel and Weed's clients were wealthy enough to provide grants for needy couples. New Hampshire did not require IVF insurance coverage then. We checked Meel and Weed's credentials. We checked with the facility that was storing the embryos. We did *not* check the clients directly since they wished to remain anonymous but we examined their purported medical records. This is also not uncommon. After we received the embryos, we called the Bergers."

Robinson looks around the room in silence. "In the last week I've found that Meel and Weed's credentials were a fraud. The facility we checked with does not exist. The credentials of the facility were a sham. I'd never have imagined such a thing. Neither had the Attorney General of Michigan. He is investigating, but after eighteen years, he is not hopeful."

Carole looks at Howe and Phil. "They don't look *that* much alike. Maybe it's all some scam."

Robinson nods. "That's not surprising. In 1999, only the Dolly techniques were available. You have to understand how different a Dolly clone is from the genetic parent. There are three forces that act on the embryo: the nonnuclear contents of the egg itself, the nuclear DNA from both the egg and the sperm, and the developmental environment of the mother. In Phil's case,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

only one of those three forces came from Mr. Howe. The remainder came from the unknown egg donor and Mrs. Berger."

Phil looks up. "Aren't there other human clones? It's been seventeen years. I can't be the first."

"Good point." Robinson straightens his glasses. "Cloning still isn't FDA approved for humans—even now, with modern techniques, there is a very high percentage of birth defects. But so what? Cloning is illegal, but that wouldn't stop everybody. It's hard to do even today, but that wouldn't mean that somebody, somewhere couldn't afford to do it in a rogue country. But we don't hear about it. Why not?"

Carol says softly: "Who's going to take a chance?"

Robinson points to Carol. "Bingo. In the first flush of enthusiasm in the years after Dolly, a few clones were produced." Robinson closed his eyes and shook his head. "Phil was one of several clones, most of which were unsuccessful. They started trying to clone humans shortly before Dolly was announced. Children were born without a brain or eyes, or with other forms of brain damage. That stopped human cloning for a long time. People barely take a chance with things like Down's syndrome, much less something scarier. There were many other legal, safe, and cheap techniques to make babies. Unless, of course, you don't care how many crippled babies you produce until you get the right one, and you're powerful, clandestine, and unscrupulous."

Phil held his hands in his lap. "Like somebody who might have wanted to clone Gordie Howe, for instance?"

"Exactly." Robinson smiles thinly. "Of course, things have changed recently. New techniques have been discovered. The debate is starting all over again."

"Why?" Phil shakes his head, feeling groggy. "Why do it at *all?* Why do it *here?* Why *Gordie Howe?*" He laughs shortly, a sound like a dog's bark. "This is New England! Why not Bobby Orr? Why not Ray Borque?"

"Who's Bobby Orr?" Robinson asks.

"Never mind."

Robinson shrugs and picks up a briefcase he has brought with him. "I have brought with me some sampling equipment. If Phil and Mr. Howe both agree, we can confirm the story one way or the other by morning."

Afterward, everyone is standing, ready to leave but waiting for Robinson to finish preparing the samples for transport.

An idea occurs to Phil. "Dr. Robinson. How many embryos did Meel and Weed give you?"

Robinson looks up at him from the table, his face suddenly tired. "Fourteen."

"What happened to them?"

"Two were used in your procedure. The remaining twelve embryos were divided among five other couples." He pauses, then continues. "Three didn't implant. One resulted in a miscarriage. There were two live births."

"Two?" Phil thinks of a brother. Someone with whom he can have this in common.

"Yes. He and his parents live in Nashua." Robinson stops again. "Oh, hell. You deserve to know. His name is Danny Helstrom. He has one of the worst cases of cerebral palsy I've ever seen."

Robinson calls the next morning. The results are unsurprising. Phil is a clone of Gordie Howe. Phil sits down, feeling depressed, though he expected the results.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

There is still nothing about Phil on the national feeds, which makes him sigh with relief. Even a momentary glance from the national media would be make things difficult. The local feeds are also quiet. He hopes it stays that way.

Phil looks outside. The sky is bright and cold, blue as liquid oxygen. He stays home and takes his pond skates down to the lake. Skipping school is a privilege reserved for seniors.

He skates hard: sprint, stop, change direction, sprint, pivot backward, pivot forward. The tension leaves his body. He's breathing hard, the cold sharp in his mouth and throat, his muscles loose as butter. Without thinking about it, he dodges between the ice fishing holes, skirts the shallows where the ice is thin, through the pipe under the bridge onto the canal feeding the lake.

It's been a dry, cold winter, and even the canal is rock-hard. He draws his bare fingers across it. The surface freezes to his fingers for a brief moment with a feeling of sandpaper. Then, the sandpaper gives way, and he can feel the smooth solidity underneath. In a rink, this would be perfect hockey ice. This ice isn't rink-flat, but frozen in bumps and waves. The ground bordering the water is lumpy with sticks and roots, and above him the branches of the trees have a dried, withered look. Around a bend in the canal, the road is out of sight and hearing, and the canal widens into a long pond. Boulders have broken the ice, and he skates between them, backward, forward, jumping over the small rocks. He wonders if he could have been a figure skater—what would Howe have thought of that? It bothers him that Howe's opinion matters. He wonders what it would feel like to execute a double axel.

He tries to remember how he became interested in hockey instead of any other kind of sport. He can't remember. He vaguely remembers learning to skate, pushing around an old milk crate and wearing a huge helmet. Then, he remembers being four and skating on the lake, playing pond hockey with older boys.

Phil stops and leans on a boulder in the pond. Sure, most of the other four-year-olds were barely skating, but it hadn't meant anything to him. It was like being good at music or math. Just playing the piano didn't make you Mozart. Just doing arithmetic didn't make you Einstein. Just playing hockey didn't make you Gordie Howe. He was always big. Most people had taken him for six when he was four. Besides, the six- and seven-year-old kids he'd been skating with were always better than he was. He had dreamed of playing in the NHL, of being the next Wayne Gretzky or Bobby Orr. Sure. What hockey-playing kid hadn't? But he hadn't felt *exceptional*. Gordie Howe had been truly amazing. Phil wonders if Gordie Howe had ever felt exceptional.

He thinks it'll be good when Roxanne gets back on Friday. He wonders what she'll think about dating the clone of Gordie Howe.

Anyone with a camera and a net-feed, professional and otherwise, finds the Berger house that afternoon. Phil doesn't go outside or answer the door. Phil's morning had been preserved by a confusion of streets in the online address databases. Instead, a family named Cohen had been harassed for hiding Phil Berger from the world.

Phil's absence doesn't stop the commercial media. That night, when the story breaks on the local feeds and broadcasts, Phil sees two students at Hopkinton High School discuss his life in detail on WHDH. Both the princi-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

pal and vice-principal tell WBZ what a terrific and popular student Phil Berger is. Phil has never met any of them. Noticeably absent from the stories is any human being he actually knows. Grainy videos of him skating shuttle back and forth across the net.

When Jake and Carol get home, they have to push their way slowly through the crowd. Four broadcasting vans are queued in front of the house. The chief of police and Phil's coach sit in a police car in Phil's driveway. Phil didn't ask them to do this, but he's glad they did. They're the only barriers between him and the reporters.

For the next few days, a police car takes Phil to classes in the morning. His coach takes him home after practice. Phil often finds himself standing in the living room, looking at the people outside.

The crowd changes after the first day or so. The local news feeds finally give way to national feeds as the debate heats up. Phil's nuclear DNA comes from Gordie Howe, but his mitochondrial DNA and cytoplasm come from the anonymous woman who donated the egg. The hormonal environment and the birth experience came from Carol Berger. How can he possibly be called natural? Whose child is he? Can Phil inherit from Gordie Howe? Can Gordie Howe demand visitation rights? Does the anonymous egg donor have any claim on him? Gordie Howe and Phil Berger have resolved the situation between them, but that does not affect the coverage; the fact of Phil's existence and Gordie Howe's fame is enough to propel the story.

The national feeds take their own obligatory pictures of the Berger house and move on, leaving the field to the tabloids, net drones, and con artists.

The coaches of Boston College and Boston University happen to visit Phil on the same day. While they are arguing on the front lawn the relative merits of the two schools, a representative of the National Hockey League takes Phil aside and tries to get him to sign with the Boston Bruins. "Why wait?" he asks.

Roxanne calls him. She tells him she's home but unsure how she feels about things. They should not see each other for a while. He stares at the phone wanting to punch something.

By Friday's first playoff game against the Marlborough Panthers, Phil is feeling claustrophobic, angry, and bitter. The Panthers take an early two-goal lead by the end of the first period. The Hillers, expecting to be beaten, are disorganized and chaotic on the ice. Phil no longer cares.

The Panthers win the face-off, but Phil intercepts the pass and comes into the Panthers' zone at full speed. At that moment, his rage and bitterness come together in him and it feels as if he is leaning into his body, grasping its strength like a man picking up a hammer. He sees the defenseman try to check him and checks him first, knocking him over. The goalie dives to intercept the puck, but Phil pivots backward and pops the puck over him to score.

He can hear the crowd roar as from a great distance. The ice has grown to fill his vision. His teammates pick up the pace with him, and by the end of the second period, the score is tied.

The third period is a war of attrition as the Panthers try to score. It is bruising, full-contact hockey, played almost entirely on center ice as both sides refuse to give up their zone. Then, with three minutes left to play, Phil goes in on the left, spins around the defenseman, and passes to his center, who scores.

The Panthers are fighting for a tie now. They pull the goalie to get six men

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

on the ice. But it's Phil's world. The ice is as broad as the sea. It's his breath and his muscle. The harder he pushes himself, the easier it gets. He is given a half-second opportunity from the corner of the blue line, and fires a shot into the open net. The defenseman cross checks him from behind after the whistle blows.

Phil's reaction is as unexpected as it is unconscious. He turns and decks the defenseman. In a heartbeat, he is the center of a brawl. He's thrown out of the game. The Hillers lose the goal and beat the Panthers four to three.

He is showering in the locker room, the water pouring over his head. He's never played that well, ever. Maybe he needed to be hungry for it. He wasn't the youngest of six like Howe. A trick of the noise and current bring him a snatch of conversation.

"So that's what it's like to play with Gordie Howe!"

Hammett writes up the game, calling it a Gordie Howe hat trick: one goal, one assist, one fight.

With Phil thrown out for the next game, the Hillers lose in the next round of playoffs and are out for the season. He returns to his classes and the story seems to die down. He sees Roxanne across crowds of mutual friends, but she is distant. So is he.

Act II

Over the summer, Phil works in his father's plant, accepts a hockey scholarship at BU, turns eighteen. While the discussion continues, it has passed him by. He has disappeared from the national and state media, overshadowed by the politicians. Instead, the dialogue has moved into the State House and Congress. New cloning regulations are proposed in several states. MassPIRG contacts him about helping their lobbying effort. Phil doesn't return their calls. Phil has become yesterday's news, and he is grateful. He and Roxanne even take in a couple of movies, though they are both very careful with one another.

He reports to the BU Terriers two weeks before classes for hockey practice. No one mentions Gordie Howe. He feels their gaze watching and measuring him. He resolves to ignore it. Things appear to be working out. He's starting out in the third line, which suits him just fine. He'd had his fill of visibility in the spring.

Practice goes well. The feeling he'd had in his last game, that sense of leaning into his body, has not left him. By the time the first game comes along, against the Air Force Falcons, he has been pulled from the third line and put in the second.

It's a good game and the Terriers win with a single goal—Phil's. He happens to be in the right place when it bounces from the glove of the Falcons' goalie. While he played well, he has no illusions that the goal was anything but good luck.

The next morning, leading the *Globe* sports feed, Frank Hammett's story lies below a picture of Phil popping in the puck: "Gordie Howe wins against Air Force."

Phil reads the story over an early dorm breakfast. Phil wonders which is real—as far as he was concerned, the goal was a fluke. According to Ham-

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

mett, it was the result of his excellence of play stemming from Gordie Howe's genes. In effect, Gordie Howe played for BU by proxy.

The warm camaraderie he'd felt during the practice weeks turns cold. Conversations dry up when he comes in the room. No one shuts him out of planning or discussion of games. But it is purely professional. Most of them, he realizes suddenly, are here on scholarship and not expecting to go into professional hockey. It's a way to get through school. If Phil wins games for them, that's good for them. But they don't have to like him.

Perversely, this seems to work for him. In high school, he'd enjoyed a certain amount of popularity. Phil was never lazy, but he was not averse to substituting a big grin and a glib tongue for work. His talents had carried him in spite of himself.

Here, though, he speaks to few and finds himself trusting no one. He concentrates on his studies and on hockey. He returns his teammates' professionalism with professionalism. They are close colleagues, not friends. His talents are an anvil and this coldness the hammer by which he forges his skill.

On the ice, the personalities and conflicts are left behind. The game exists to the exclusion of all else. On the ice, Phil is free.

It is no accident that he is brought up into the starting line by midseason.

Hammett has developed a pattern in his stories: if the Terriers do well, it is because they have Gordie Howe playing for them. If they do badly, it is because of an inadequacy in Gordie Howe's clone. The language keeps the debate fresh. More than once, late at night, Phil, too exhausted to sleep, tunes into the sports feed, only to find the cloning debate in full swing, with him in the starring role. In November, in a fit of sudden, killing rage, he rips the display from the wall and throws it through the window. Phil's room is on the sixth floor. It is pure accident that no one is hurt. He cleans up the mess that night before any reporters get wind of it. He does not replace the unit. He thinks about taking a yoga class or something to relax. The idea of a Hammett headline saying "Gordie Howe Takes Yoga" stops him.

Phil keeps reminding himself what had happened in his last high-school game; how a sudden burst of temper had cost him the rest of the playoffs. College hockey plays by the same rules: fighting gets you ejected from that game and the next. He keeps his temper under control. Still, he occasionally checks too hard or hooks too vigorously. His penalties mount.

By February, Hammett has accused him of bringing "NHL-style hockey to Boston University." Phil speaks little, works very hard, and only seems to come alive on the ice. His parents try to talk to him, but he answers in monosyllables.

Then comes the first night of the Beanpot.

Since 1952, the four hockey teams of Boston—Boston College, Boston University, Northeastern University, and Harvard—have played against one another for bragging rights and a bowl of beans: the Boston Beanpot. Boston College is paired up with Boston University in the first game—a rivalry within a rivalry. The game is fought like trench warfare. No inch is lost or gained; no goal is scored. Then, BC scores the first goal. Phil scores the second for BU on a breakaway. Both teams are playing better than they have in months. The game is full of hard and sweaty grace. Phil is at home with his teammates, with the game, with the ice.

In the middle of the second period, Phil is carrying the puck into the Boston College zone. He sidesteps the defenseman and goes around him.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The defenseman turns and tries to hook him, but loses his balance on the pivot. Instead, the stick whirls high in the air and slaps the side of Phil's helmet, directly over the ear, knocking him down. There is no injury, but the pain pins him to the ice for a moment. He stands and skates slowly toward the face-off circle. The defenseman protests the penalty. Phil looks around the arena, sees Frank Hammett watching him from the other side of the glass, shaking his head. Phil can almost hear what he's thinking: "Not much like Gordie Howe. Gordie wouldn't take that. Not him." Phil can almost read tomorrow's article: "Gordie Howe's Clone Not Up to the Original." It pounds in his chest along with his heart. He can see what will happen next.

The defenseman gives up arguing with the ref and starts to skate over to the penalty box. When he comes near, Phil pulls up with his stick and the defenseman goes down on his back. Without thinking, Phil lands on him with both knees. Then, Phil pulls off the defenseman's mask and starts pounding him. This is no stylized violence like the NHL. Phil is out to kill him. This is not Gordie Howe, he is thinking. This is me.

His teammates pull him off. The defenseman curls on his side. The refs throw him out of the game. His coach screams at him in the locker room. *Gordie Howe would never have done that!* Phil is out for two weeks, and maybe for good. Everything seems to happen from a distance.

He puts on his clothes and goes outside into a deep clot of reporters. They're just as far away as everything else. He just keeps walking, through the West End and downtown Boston. Past the Commons. Eventually, no reporters follow him and he is alone in the South End.

He finds a hole-in-the-wall bar on Columbus Avenue and orders a beer without thinking. As if it's the most natural thing in the world, they serve him, even though he's underage. Something about his abstracted manner and his size suggest he's older than he is.

It's the NHL for me, then, he thinks. Why not? Or the minors—there's more fighting in the minors. At that moment, he thinks he could enjoy the minors.

It happens as gently as snow on ice. A man jostles him on the way to the john. An insult is exchanged. Phil swings. The two men end up on the floor. Phil rolls over on top, and for a moment as he pounds on the stranger, as he wanted to pound on the defenseman, as he would have gladly pounded Frank Hammett or even Gordie Howe, he loves this stranger as he has no other.

The bartender knocks him out with a sap, and he awakes, dizzy and puking, in the back of a police van. The nameless man he had been fighting is not there. It is only Phil and another, unconscious drunk. He leans back against the wall, wondering what happens next.

Phil finds out at the arraignment that the man's name is Kenneth Roget. He has been released from the hospital with a mild concussion and missing teeth. Phil gets six months' probation and two hundred hours of community service. Roget threatens to sue, but the DA points out that Roget has a history of bar fights and is already on probation for assault on his ex-wife. The DA gets Roget to settle for medical costs.

Hammett's article reads: "Gordie Howe's Clone Jailed for Assault."

BU kicks him from the team and out of the university. He moves back home, contented for the moment to do his community service. His parents try to talk to him, but he is sullen and uncooperative. They suggest he call his friends from high school. He leaves the phone untouched.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

* * *

For his community service, he works as a janitor at the Framingham hospital. The simple and silent work suits him. He is invisible as he mops a floor or pushes a cart out to the trash compactor. Medical staff and visitors stream past him, oblivious. The patients, especially the chronic ones, strike up incidental conversations with him. One man, a paraplegic from a car accident, reminds him of the other Howe clone, Danny Helstrom.

That night, on impulse, he finds a single Helstrom in Nashua, though there are two others in nearby towns. Phil wasn't sure how he should proceed. Call him? Could Danny Helstrom even speak? There but for chance and circumstance goes Phil Berger.

A woman answers the phone. Her voice is tired. Phil is surprised. He expected a recording. Jake and Carol have been screening calls for nearly a year.

"Uh, hi." Phil can't think of anything to say. "I'm Phil Berger."

"Yeah?"

There is silence. "Is there a Danny Helstrom there?"

"Oh," comes from the other end. "*That* Phil Berger. Robinson said you might call. I figured it would have been last spring."

"Yes." There is silence on the phone. "Are you Danny Helstrom's mother?"

"You bet. Grace Baker."

"Baker?"

"Danny's father couldn't take it. He split when Danny was two. Funny, huh?" She laughs bitterly. "You want to meet your clone brother? I think it's a bad idea, but Danny would like to see you."

Danny Helstrom looks like Phil. At least, if Phil had been stretched thin and shrunken, then broken and reset, he would look like Danny. Danny has never been able to sit erect. He half lies across the wheelchair fabric on his right side. His fingers are long and graceful, and move gently and independently of him like the tendrils of a sea anemone. His voice is high and nasal. He weighs barely ninety pounds. Looking at Danny makes Phil feel obscurely ashamed of standing on two legs, of feeling his muscle and strength, of being able to speak. When Danny looks at Phil, it is out of Phil's own eyes.

Danny smiles, quivering; half his face locks up and releases. He speaks. Danny only has partial control of the muscles of his tongue and lips; his words are a smear of long vowels, grunts, and hisses. Grace interprets for him: "He's really glad you came up here. He thinks of you as his brother."

At first, Phil doesn't know what to say. He's not sure why he's here. "Good, I guess," he says hesitantly. "Did Dr. Robinson test you, too?" It seems inconceivable that this broken creature could be a clone of Gordie Howe.

"Yeah," says Grace. "Gordie Howe. Just like you."

Danny says something to Grace. She frowns. "Are you sure? I should be here."

Danny gives her his half smile and replies. She shrugs, leaves the room, and returns with a black box fitted with a speaker. She attaches a microphone to Danny's shirt, gives Phil a long glance, and leaves the room.

Danny makes a sound like a cross between a moan and a stutter. The box says in a monotone: "She's trying to protect me."

More at ease with Grace out of the room, Phil sits down on the bed. "How come?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"She thinks you'll hurt me because I scare you." Danny half grins again. "Are you scared?"

Phil watches Danny. Something feels like it's cracking inside him. "Yeah. You scare me."

Danny flops his head back and forth in a nod. "I could have been you. You could have been me."

Phil sighs. "Yeah."

"I know. Could be worse." He grins again. "Could have not made it at all."

Phil clasps his hands together. This is my twin brother. "Is that what you really think?"

Danny looks back at him. "Because of my body?"

"Yes."

"Yes. I do. I'd rather live."

"Okay, then."

"But you owe me."

Phil spreads his hands. "How do you figure?"

Danny tries to point with his finger but it trembles in the air as if underwater. Instead, he nods in Phil's direction. "You got the legs."

Phil looks at himself. "Yeah."

"Tell me about hockey. Tell me what it's like to play like Gordie Howe."

Phil lets his breath out slowly. Danny's right. It's the luck of the draw that Phil got the body and Danny didn't. He owes for that luck. He has obligations to Danny, as close to a twin brother as he will ever know, because of that luck.

He thinks for a long time. It's important to say it right, to express it. "If I could fly," he says at last. "It would feel like skating."

The Bruins call him. He does not return the call. The Ice Cats in Worcester, the Chicago Freeze, the Florida Everglades. He does not return the calls. He has the phone screen out sports agents. He does not understand why he's doing this. It is only a minor assault charge. Professional players have done worse, taken worse penalties, and still played. He may not be Gordie Howe, but he could still play with the Amarillo Rattlers, for God's sake. He's at least that good.

Frank Hammett's article reads: "Clone of Gordie Howe a Janitor in Framingham."

Something in him breaks.

He finishes his community service by June. Jake gives him two thousand dollars. Phil takes his car and leaves town. He tells no one where he is going, since he doesn't know himself.

Let Frank Hammett write about that.

The principle around which Austin, Texas, revolves is heat.

It is late. Phil lies on the bed staring at the ceiling, waiting to go to work. His head is next to the window, the coolest spot in the room, but that's not saying much. He shares a house with three strangers. He'd found the house advertised in the paper when he'd hit town in June. It was cheap, and he liked the idea of living with strangers. Later, he realized why the house was cheap. It's made of brick, and the Texas summer sun turns it into a rock oven in the day, and the bricks re-radiate the heat at night. In the Texas winter, it is merely uncomfortable.

Every town has a hockey team these days and Austin is no exception. The

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Austin Ice Bats are resting comfortably near the bottom of the WPHL. Last week, against his better judgment, he'd gone to see them play the Amarillo Rattlers. He knew as soon as the game started that the Ice Bats would knock down his door if they knew he was here.

Phil tends bar in the Mexican side of town. The only Spanish he knows is "otra cerveza," "un tequila," and a list of other liquor-related words. He takes the money, sometimes dollars, sometimes pesos, and serves the drinks in silence.

Mainly, it's hot. Even in February. One of the other bartenders has lived in Austin all of his life and says it didn't used to be so hot in the winter. But now the February sun burns down and it's in the eighties every day. Up North, he thinks, there are the January snowstorms followed by February, when everything freezes so hard you can't even bury somebody until the spring thaw. Then, there's March, when the ground gently softens under the wet snows, April, when it's mud season, and a quick spring in May.

As he cleans the bar, he thinks of winter in Massachusetts, when the temperature starts to hover around zero, and the ice gets thick and draws all the water from the air and the ground starts to feel rough and bumpy as it freezes down. Everything comes down to essentials in a New England winter: bare trees, snow, frozen earth, ice.

Down here, it feels too easy to be winter. The Anglos sail on the man-made lake. They water their grass. They grow their flowers. February is just another month.

He corresponds with Danny regularly. Instead of the net, they send written letters, on paper, by mail. Except for packages and certified letters, physical letters are largely a thing of the past, having been replaced by photon packets moving at the speed of light. Danny started it and Phil responded the same way. Neither has ever talked about the comfort of holding a paper letter.

Phil's letters go like this:

Danny,

I'm still working at the bar. We've got a little heat wave now so every night the place is packed. Lots of sweaty music. I'm tending bar on weekends so I get some more money. By the way, guess who I ran into down here? Roxanne, my old girl friend from high school. Seems she went to University of Texas. She's been down here all this time and we never ran into each other. She came into the bar and recognized me. It was good to see her. She's engaged to a nice enough guy.

My boss Guillermo took me camping out of the city a couple of weeks ago. I'll say one thing about Texas. The sky is just as big as people say. We lay in our sleeping bags drinking Jack Daniel's and just watching the moon go by.

Write and tell me about things up North.

Phil

Phil knows the process Danny goes through to write a letter. If he uses the voice writer, it's a struggle to get the words out, a struggle to correct them when the writer makes a mistake. Phil has seen Danny sweating and shaking after leaving a note for his mother.

Instead, Danny usually prefers to use a specially fitted keyboard. The process is still slow and laborious, each key combination carefully thought out and forced through his trembling hands. But it's easier than speaking. Such a letter might take Danny a week or more of concentrated effort. Each

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

letter Phil receives feels heavier than his own, as if the effort has given it mass and heft. Phil keeps a box in his room and each letter from Danny is carefully flattened and stored there.

Phil wonders why he saves the letters so carefully. He thinks it might be the way Danny always talks about little things going on around him. Danny is home most of the time and the local world is most of what he sees. Other times, he thinks it's because it was only an accident that Danny was the crippled one and Phil was born unmarked. Both could have been crushed by their birth or neither, or Phil could just as easily have been locked into the wheelchair by his own body and Danny been whole. As Danny had said the first day, Phil owed Danny something. Recognition, maybe. Acknowledgment. Respect.

But often, as he carefully smooths the paper wrinkled and creased by travel, he feels as if he is saving something important, a message in a bottle from another country. It is not as if he is saving the work of some great artist or poet—in fact, when he thinks about it, he wouldn't save such things the same way or with the same reverence. No, this is more like saving letters from your father in wartime or your brother who lives across the world from you. The letters show your connection. You treat their letters as carefully as you would treat them if they were here but sick or dying, because by taking care of the letters, you're taking care of your brother, or your father, or your friend.

Danny's letters go like this:

Dear Phil,

I had a good day. I bundled all up and took the chair outside while Grace was at work. She hates it when I do that because she's scared I'll get stuck out there. But the sky had that big carnival glass bowl look and the snow was on the ground. I was able to scatter out some bird seed and pretty soon two gold finches, a cardinal, and a bunch of titwhistles were hopping all over me. I don't know where the cardinal came from. I thought they migrated.

I'd like to see the sky you were talking about. Maybe Grace and I could come down later in the year.

Dr. Robinson visited. Guilt, I suppose. I told him I wanted to try the Twain treatment. I said it was a special device that combined the principles of the screw, the lever, and the inclined plane. You attach it to the upper part of your jaw and it extracts the entire skeleton. Then, you send the patient home in a pillowcase. He was going along with me until the extraction. He is such a serious man. Then, he got huffy for a minute until he saw I was baiting him. He laughed.

At one point, I went with him to the kitchen and bumped him two or three times with my chair. By the time he'd apologized a couple of times for *me* bumping *him*, he figured it out and turned into a pretty nice doctor. He gave me the straight skinny on what he knew both on the cloning and how it went so bad in my case.

I've been doing some net searches in the last couple of months about the cloning. I didn't find anything. You should go up there and talk to the detective Dalton used. His name is Rice.

Austin sounds great but you belong up here. This is where you will end up; I feel it in my twisted little bones. Down in Austin you're just marking time and three years is a lot of time to mark. Up here you could be doing something with your—and, I confess, our—life. It's important to do more than tread water, even if you drown.

At least you could do the legwork for me and go up to Detroit and talk to Rice.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

I sure would like to find these people. I'd like to know why they cloned us and, more interestingly, why they revealed you alone. Maybe they have clone marketing plans.

Hey, you could take me with you and I could see another Big City: two in one lifetime!

Danny Helstrom

He gets a call from Grace. Danny is in the hospital with congestive heart failure. Come home if you can.

Phil thinks about Danny all the way from Austin to Massachusetts, about his twisted body, his half smile, his letters. Phil takes with him his collection of perhaps twenty letters as if they were talismans. He'd read them over before he left and thought about them during the drive. Phil wishes he had been able to write better letters in return.

Danny is able to smile at him when he gets there, but can do nothing else. He slips into a coma soon after. Grace signs the Do Not Resuscitate order, and, after a long two days, Danny's heart gives out and he dies.

Phil and Grace sit in the room with the body afterward, talking of small things: the weather, the sun coming in the room, Danny's letters. Danny's body is small and still on the bed. Sitting together feels as natural as breathing.

When it feels right, they leave the room and tell the nurse. On the way to the car, Grace takes him and grabs his hand and turns him so he has to look her in the face. "Danny wanted me to tell you he couldn't have had a better brother than you."

"Thanks," he mumbles.

The funeral is a small thing: Grace, Phil, Phil's parents, Gustavo, the aide who had helped with Danny after Phil had left, Dr. Robinson. Gordie Howe sends a short note of condolence. Ill health has prevented Howe from attending. Danny had requested cremation; as far as Danny had been concerned, this was the end of the line for that body.

Driving to Detroit to meet a private detective is paying a debt. Rice's office overlooks the river, and Phil can see the civic center in the distance, and, beyond that, Windsor, Ontario. When he enters, images of him, Danny, his parents, and Gordie Howe are being displayed on the wall along with annotated legal documents and forms.

"I reviewed our files and checked to see if there is any new information," says Rice, gesturing to the wall. "Nothing new has turned up in the last few years."

"Danny thought there was a connection between Meel and Weed and Gordie Howe. Gordie Howe played for the Red Wings for a long time when they were in Detroit. Could that be true?"

Rice looks suddenly tired. "You know, Dalton tried to make the same argument." Rice rubs his thumb along the edge of the desk. "Tell me, Phil, where did your parents meet?"

"In college. They both went to Brown University."

"But your mother was raised in Hopkinton. Your father came from Hopkinton, too. They never met in high school?" He gestures to the wall. "We have it all on file from the work we did for Dalton a few years ago."

Phil shakes his head. "They didn't meet in high school."

"Yet they met, presumably fell in love, at Brown, subsequently married, and returned to Hopkinton. Was there a plan in that?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"No. They just met in college."

"Exactly. A coincidence without an overarching plan. Coincidence is not evidence of conspiracy, Phil. 'Sometimes a cigar is just a cigar.'" Rice waves his hand in the air. "The truth of the matter is that we had very little to go on when we started looking for Meel and Weed. Subsequent investigation—including a regular check on new information—has yielded nothing. People often get away with things and it looks like this is one of those times."

Rice falls silent for a moment. "I've been in this business for about twenty-five years. When I was younger, I worked on a case interestingly similar to yours. Upon the death of her parents, a woman had discovered she had been adopted. Her parents had not understood that their new baby had been stolen in Texas, from an illegal Mexican immigrant family. She wanted to find her birth parents and was unable to do so through conventional means. She came to me. The adoption had been forty years before—sixty-five years ago, now. I went to Texas and searched through birth and death records for two weeks, both in Mexico and along the border. In the end, I came back here and had to tell her I couldn't help her. She was heartbroken."

Rice stares at his thumb for a moment. "I've thought about that case for years. It's one of those problems you keep trying to solve even when you know you can't. I still send inquiries when I think of something. I still make calls. I say to you now what I wish I had said to her at the time: what's done is done. You are a young man. Your past does not determine your future." He points to the wall. This time the pictures disappear. "That does not determine who you are. Only you can do that."

Rice stands, signaling he is done.

Phil rises with him. "Did she ever find her birth parents?"

Rice smiles. "No, but I managed to console her. I married her."

When he returns from Detroit, Phil is struck by how frail his parents seem. The house seems empty. When they ask him where he's going next, he doesn't know. He has some money saved and his car is still serviceable. They ask him to stay, but he shakes his head. He doesn't think he can live here ever again.

Act III

Portales, New Mexico, could be another country. Out here in the desert, halfway between Santa Fe and Lubbock, the names of the towns sound like private jokes: Clovis, Littlefield, House, Floyd, Levelland. Roswell is only an hour away, and people in Portales talk about UFO's and flying saucers the way they mention the car wash and the drug store.

It's an accident he's in Portales. He had proceeded southwest from Amarillo on a whim once he realized the mountains in the distance were still a hundred miles away. His car boiled over and threw a rod. It's spring and the flowers are everywhere, along the road, in front of the adobe and stucco houses. The colors are different from anything he's ever seen. It's as if every flower he's seen before this shouted at him. These flowers smile shyly and whisper. He walks along the road and can't think of words for the colors. Is this azure? Is that peach?

He gets a job tending bar again. Portales is twenty blocks by thirty blocks.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

After that, there are the ranches. After that, the desert. He keeps thinking of the winter in Massachusetts, the trees, the cold, the ice. Here, it has to break a hundred degrees to get a comment. Sweat disappears without being noticed. Open water looks like a miracle. In Massachusetts, everyone was a different shade of pale. Here, everyone is a different shade of brown. In Massachusetts, Jake had refused connections to feeds his neighbors thought indispensable. Out here, though the net is as close as a telephone or a cable line, there are no local feeds at all.

He takes a room above the bar and settles in. For the moment, he feels at home.

Every Friday night, a tiny dark man enters the bar. He has a thin, unsmiling face and flat steady eyes. Frank, the owner, points him out as Esteban Correleos. He drinks tequila at a table by himself until he passes out, around midnight. When Frank closes the bar, he picks Esteban up and sets him carefully on the porch. By the time Phil wakes up and comes downstairs, Esteban is gone.

After Phil has been working at the bar for a few months, Frank starts letting him close on weekends. He inherits the task of moving Esteban outside.

One night, as he is carrying Esteban to the front porch, Esteban wakes up unexpectedly. He stares right at Phil and makes a long speech in Spanish. Phil stares back at him blankly.

"Tequila?" Esteban says, finally.

"Sorry, friend," says Phil as he puts him down on the porch. "Last call."

"Sí," says Esteban very sadly.

Phil takes pity on him and buys them both a bottle of Cuervo while he walks Esteban home. They spend the rest of the night drinking and talking. Esteban has lived in Portales all of his life. He repairs the ancient farm and ranch equipment used on the poor farms and ranches around the town.

He wakes on Esteban's sofa. He lies there, feeling the nauseous glow of a tequila hangover. The first thing he sees is an old upright grand piano painted a ghastly orange. The initials CJC are carved into the side and some of the veneer is peeling. The ivory is missing on half the keys, exposing the ancient glue underneath. There are open music books held ready on the face of the piano and the stool is worn.

Esteban's wife, Matia, startles him from behind. She is a gigantic woman, towering over him with a dancer's grace. He looks up at her, and she silently hands him a dry flour tortilla as a cure for a tequila hangover. Phil hears a cough and turns toward it. Esteban is sitting in a chair to one side of him, chewing one thumb thoughtfully. Phil sits up slowly and looks around. The house is two stories, unusual in Portales, with a heavily carved stairway ascending into the dark upstairs. Phil can hear faint voices coming down the stairs. There are at least four children playing in the next room, though his hangover keeps him from being sure.

"How did you come to be here?" Esteban asks at last. His voice is surprisingly deep for a small man, and his English is precise and well spoken.

"From Amarillo," says Phil, holding his head.

"That is not what I meant." Esteban shakes his head. "You're too smart to tend bar."

"Frank's not exactly dumb."

Esteban ignores him. "Where are you staying?"

"Frank rents me a room."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Bring your things over here. Matia will have your room ready when you get here."

"What?"

"You're coming to work for me."

At first, Phil resists. He has been making his own way for a while now and has little desire to have anyone take over his life. But Esteban's utter disregard for his protests and arguments has its effect. Without quite realizing how, Phil finds himself living upstairs. He quits his job at Frank's, which Frank does not appreciate, and starts working on hot, rusty tractors out in the desert. Esteban does not teach. Instead, he points to a non-descript piece of wire-shrouded Bakelite and says: "That belongs here," pointing to an irregular opening in the engine. Phil learns by doing. In time, he discovers he has a talent for it. He wonders if Gordie Howe had ever torn apart cars when he was young. He wonders who Gordie Howe is outside of hockey.

Esteban has six children, ranging in age from six to twenty. The oldest is named Chela. Phil only knows that she works for archeologists out of Albuquerque and is home only between digs. He meets her coming in after living in the house for a few weeks. He opens the door and is assaulted by the crashing of the piano. Startled, he looks around, and sees a dark woman playing intently. Phil realizes that this must be Chela.

Chela is small even compared to Esteban. After a moment, she looks up from the music and sees him. Her eyes look sleepy and she smiles slowly. Her nose is big and bent.

"Who the hell are you?" she asks.

"I'm Phil Berger. I live here."

"Hm." She eyes him speculatively. "Do you speak Spanish?"

He shakes his head. "Not much. I'm still learning."

Instantly, she turns her head and shouts toward the kitchen in rapid Spanish. Matia comes out, her hands covered with corn meal. The exchange is heated, and Phil does not understand one word of it. Matia waves Chela away in disgust and returns to the kitchen.

"What was that all about?"

She ignores him. "Have you ever been arrested?"

"What?"

She looks up at him. "What for?"

"Assault," he says nervously. "I got drunk and got into a fight."

"Drink a lot?"

"No! Not much at all."

She spreads her hands. "Are you sure? Esteban brought you home drunk."

"Not true. *I* brought *him* home. I just drank with him afterward."

"How long are you going to be here?"

Phil sits down on the sofa. "I have no idea."

"I see." She sits comfortably on the piano stool, watching him. He feels uncomfortable enough to leave the living room and go back outside, irritated with himself.

From then on, Phil can never predict what she's going to say. Her confidence makes him nervous and he avoids her, preferring the company of the younger children, who like him without reserve. On those rare occasions that he talks with Chela, Esteban and Matia supervise them so subtly that Phil is never aware of it.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Esteban's family is from San Luis Potosi, Mexico. Each November, he takes Matia and his children there for the *Día de los Muertos*, the Day of the Dead. He invites Phil along, but Phil declines. Not this year, he says.

Instead, he decides to hike up into the Sangre de Cristo Mountains near Taos, where the Pecos River arises as a rumbling little stream. His life has been too hot and he longs for the cold and the ice.

Chela interrupts the conversation: "It's pretty country up there. I'll give you a lift. I have to go up to Raton anyway."

Esteban looks at them both, shrugs. Matia starts to say something, but Esteban glances quickly at her and she stops.

"I have my own car," Phil says quietly.

"It's better not to drive alone." She smiles at him sweetly. "Besides, it's cheaper."

Gas has gone up again, and a continuing discussion in the Correleos family is whether or not to buy a new electric vehicle. Esteban has been against it for some time, since most of his clients are still using ancient gasoline trucks and tractors.

The conversation is surprisingly easy between them as they drive north. As Chela's little car reluctantly climbs into the high country, Phil watches the spine of the land gradually become visible. These are not ancient piles of rubble such as he grew up with in New England. These are bare scarps of rock, shoved through the surface of the earth like a knife.

It's much colder than he thought it would be, and he's worried he will freeze.

They stop at the edge of the Taos Wilderness, and Chela parks the car. He pulls his pack out of the back seat and adjusts it. When he looks up,she is admiring the mountains up above them.

On impulse, he says: "Want to come along?"

Chela grins at him. "I was hoping you'd ask."

She pulls out extra clothes and hands them to him, then pulls out her own pack from the trunk.

"Excuse me?" he says. "I thought you had to be in Raton?"

She nods. "Next week. Do you think Papa would have let me come if he knew I might go into the wilderness with you?"

"Did you plan this?"

She smiles again and he likes the way her face brightens. "Let's say I was hedging my bets." She laughs and Phil smiles. Her laugh is deep and infectious. "Besides, you've never been up here. I have a bunch of times. I can show you things you've never seen before."

"I don't doubt that."

She looks up at him, amused, shoulders her pack, and leads the way up the switchback trail.

At first, Phil is unsure what to talk about, and loses the easy comfort of the drive up here. Chela, for her part, does not press him, and for the first day, they only speak of the trip: should they try to camp at the base of yonder peak or the closer one, should they follow the mesa or take the edge trail down into the valley?

The trail they choose ascends the smooth shoulders of the high peaks before turning onto a long, gentle decline into one of the campgrounds. At the top, in the distance, Phil can see something that looks like a herd of deer. He looks at Chela. She nods and says, "Elk. They'll be moving down when it starts to get colder."

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Can we get closer to them?"

Chela shakes her head. "They'll start to run pretty soon. Usually."

"Usually?"

Chela doesn't say anything for a moment. "When I was a kid, Papa brought me up here and took me camping in a little valley on the west side. I think I was ten. We came up on them at sunset. They didn't move. We got so close I could have touched one." She watches the elk in silence. "Papa said it was because they knew who I was."

Phil turns to her. It is late in the day, and the shadow of the peaks has started to darken the valley, but there's clarity in the light. The air is sharp, and there's the cold metal taste of snow in the air. Chela's face glows as reddish-brown as the earth. The whole world seems to emit its own light.

Who are you? he thinks.

That night, their breath coats the inside of the tent with frost as they talk. She speaks of first finding shards of pottery in the plowed land and wondering how they got there. He tells her of Danny's letters. The ground beneath them feels changed. It is the most natural thing in the world to curl up together. Phil holds her close, enjoying the smell of her, the texture of her skin and the sound of her voice as they talk. Something in him lets go, and he closes his eyes as he falls asleep, convinced that he can feel the earth turning beneath him.

Gordie Howe dies on Christmas Eve at the age of ninety-nine. Phil is twenty-eight. He has been working with Esteban for five years. He sends flowers to Murray Howe. Murray replies with a short post, and they develop a correspondence. The following year, when Phil and Chela are married, Murray comes down for the wedding.

It is a warm fall night in Portales. The desert air has a chill, but the earth is still radiating heat. Murray and Phil are drinking beer, and from a broken picnic table in the darkness deep behind the house, they watch the people. Phil can see Jake and Carol talking with Matia and Esteban. He wonders what they are talking about. He is continually surprised at how well his parents and new in-laws get along.

The party is starting to wind down, though many of the guests are still dancing. Esteban has brought up a Marielito band from Santa Fe and the high tenor of the singer wafts over them.

"Does your new wife know about you and Dad?"

Phil nods. "I told her a couple of years ago. Esteban knows, too. I had to explain who Gordie Howe was."

Murray laughs shortly. "Not something I've ever experienced."

Phil pulls a plastic bottle from the pocket of his suit, along with two Styrofoam cups. He pours a viscous yellow fluid into them, and hands one to Murray.

"And this is?"

"Pulque. Esteban makes it himself."

"Will I go blind?"

"The effect is temporary."

Murray sips. He closes his eyes and makes a face. "Now, that's a flavor not found in nature."

"You get used to it."

Murray opens his mouth experimentally. "Is it supposed to make your mouth numb like that?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"That's just part of the effect."

Murray nods, and they fall silent. He points toward the house. "I'm glad I came down here. Dad was always a little worried about you."

Phil smiles. "I never wanted to bother him."

"Yes. I can understand that. He was sorry you didn't go on into the NHL. He said," Murray thinks for a moment. "He said he was glad that *he* knew about the cloning, but he wished you didn't. So he could watch you. He thought you had what it took." Murray stops for a moment. "He thought you made a mistake leaving Boston. You should have gone on in the minors. You would have made it to the NHL eventually." Murray points to Phil suddenly. "Not that he disapproved of you. He understood perfectly."

Phil looks back at Esteban's house. Chela has joined Jake and Carol. Somebody says something—Carol, probably—and Chela bursts into laughter. He can hear it float in the air like music. "Thanks," he says finally. "But I did okay."

Murray shrugs. "So, are you going to stay around here?"

Phil shakes his head. "Chela wants to go back to Albuquerque. She wants to finish her degree. Wants me to go back to school, too."

"Ah. She's in archeology?"

"Yeah. Says she's tired of working on other people's digs. She wants to start some of her own."

"And you?"

Phil shrugs. "I'm not sure. I like working with Esteban. I like working with machines." He stares back at the party. "But I'm going to be thirty soon. There ought to be something more."

Murray sips the mescal and makes a face. "You'll figure it out."

"Did Gordie ever work on old cars?"

Murray stares at him a moment. "I have no idea. Why?"

Phil watches Chela move in front of the window. She sees him and waves. He waves back. He is surer of her than he has been of anything else in his life. "No reason. Just curious."

Albuquerque is a real city with buildings and businesses, and, at the heart of it, the University of New Mexico. After six years in a small town like Portales, Phil finds himself edgy at first. He discovers, though he remained essentially at rest in Portales, the rest of the world has continued to move. Any residual problems with the cloning techniques that produced him have been rectified, but there are still very few clones in existence. Advances in fertility medicine have made the obvious use of cloning unnecessary. There is a caution in the debate now that he didn't remember from when it seemed to center around him. A surreptitious search for his name in the news brings up only a small article about Frank Hammett leaving the Globe Corporation to return to the Middlesex-Worcester News Group.

They find a small four-room house a few blocks from the university. The house has a yard perhaps twenty feet square and abuts against three other similar houses. Like other newlyweds, they explore each other's bodies. They discover that in normal conversation, they speak English. When they make love, it is in Spanish.

A number of times in the last few years, when Esteban had been unable to build, borrow, or buy a part for the old tractors of the Portales farmers, he had called Frost Fabrications in Albuquerque and had the part made. Phil knows John Frost, and gets a job there.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Chela starts studying in earnest. Phil supports the two of them. Phil likes fabrication and Chela likes school, so for the moment they are happy.

Frost Fabrications builds parts for many clients like Esteban, and uses several old mills and other machines to do it. They joke about all the gray hair at Frost. Phil is the youngest person on the staff, and gets his share of ribbing.

There's also a more modern section of the plant that receives fully-formed designs from different feeds across the country. Some of the machines connected to the feeds are automated and can build simple components without supervision. Phil is excited by the prospect, and before long, he leaves the manual fabrication part of Frost and is working exclusively with the telefabrication units.

Even Frost's telefabricators are out-of-date. Phil reads about general fabrication systems that do not directly build components at all, but instead design and build microscopic automated tools that then build the components. There is research in this area going on at the University by a man named Mishra. John introduces them, and over the next year or so, Phil and Mishra exchange techniques.

Chela finishes in two years and starts to work for the Archeology department. Phil starts in the Mechanical Engineering department with Mishra as his advisor. He splits his time between Frost Fabrications and school. There's little time for anything else. Working very hard, he finishes his degree in three years. Then, with a loan from Esteban, he and Chela buy the telefabrication business from John Frost and start Berger Operations.

One warm February night, with a glass of champagne and over a wonderful dinner, they ritually flush Chela's birth control prescription down the toilet. Then, they make aching sweaty love in the heat.

By April, she is pregnant.

They name the boy Jake Esteban Berger, making both grandfathers swell with pride. He is a January baby. Days after he is born, Phil still finds himself holding the baby, searching the child's face for signs of Gordie Howe. A few things must have come from him: the blue eyes, the shape of the hands. The rest, it seems, came from Chela. Phil's eyes are settled in Chela's dark face and framed by Chela's black hair. Phil finds this comforting.

Little Jake is born in a mild January, and Chela and Phil make plans to take a leisurely trip late in the summer through Texas and the Deep South, up the Atlantic coast, stopping in Washington, Philadelphia, and New York, before spending time with the Bergers. Jake's second heart attack eliminates those plans.

Instead, Phil hastily leaves everything in Mishra's hands. He, Chela, and little Jake fly out and land in Providence. An automated cab takes them the last hour directly to the hotel.

It is an odd spring for Massachusetts. Unseasonably warm weather has been suddenly shattered by winter storms. The result is ice over trees, flowers, bushes. It gives the place an odd sort of beauty. Phil sees azalea blossoms encased in glass. The birches in the front yard are bent over nearly to the ground with cathedral effect.

They drop off their bags and continue on to the MetroWest hospital in Framingham. Carol is sitting with Jake in the coronary unit. He is enshrouded in wires, tubes, and sensors. Behind him is a huge display unit, with perhaps two dozen windows showing his heartbeat, his oxygen, his

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

breathing, and other information arcane to Phil. Jake's heart is on an artificial assist, but he still looks thin and pale. His eyes light up when he sees little Jake. He reaches up his hands.

Phil glances at Chela. She nods. Against his better judgment, Phil gently puts the child in Jake's arms. Little Jake is only four months old. Phil is ready to catch the baby if Jake's hands fail him, but Jake carefully folds the infant in the crook of his arm, safely away from tubes and wires. He croons gently to the child. Little Jake watches him with an unwavering gaze, as fixed and eternal as a sphinx.

Carol explains the options to them. Jake can get a completely artificial heart, a human donor heart, a pig-derived heart, or keep the artificial assist. However, he does not seem to be handling the artificial assist well, and there are no human donors available. That leaves the artificial heart and the pig-derived heart. There is the very real possibility that if Jake cannot tolerate the artificial assist, he might have difficulty with the artificial heart. The doctors want him to take the pig heart. Jake is resistant to the idea and wants to hold out for a human donor.

Carol shakes her head. She looks as if she is about to cry. "I don't know what to do with him. I really don't."

Chela holds her, murmuring over and over: "We'll think of something." She looks at Phil and points with her chin toward Jake.

Phil stands near his father. Jake is tickling the baby's chin. Little Jake laughs and spits up. Jake cleans him up with a tissue from the nightstand.

"Dad—"

"Hush," Jake says. "I'm busy." He coos to the baby and tickles him again. Little Jake laughs and waves his hands in the air.

Jake looks up at Phil. "This is the best gift you ever could have brought me."

"Dad. We have to talk about your heart."

"No," Jake says. "We don't. It's not your decision, Phil."

"I know that. But—"

"I'll lay it out for you." Jake tucks Little Jake against his side. "I don't want a pig's heart in me."

"It's not a pig's heart. It's a human heart that was grown in a pig."

"I don't want it. This thing—" Jake points to the incision in his chest. "Is just barely good enough to keep me alive. I don't want another one."

"Dad—"

"So, it'll just have to keep me alive long enough to get a real heart."

Phil stares at him. "Even if it kills you?"

Jake nods slowly. "Yes. Even then."

"Okay." Phil closes his eyes and takes a deep breath. "Okay. I accept that. Now, explain it to me."

"The pig's heart—I just don't want an animal in me. I don't care if it started out as a human or a goat, I don't want it." He falls silent. "I thought a lot about this when I had my first heart attack. You know what you want out of a heart? Besides keeping you alive, I mean."

"No. What?"

"You want it to do its job. You want it to keep beating day in and day out without you thinking about it and monitoring it and wondering if it's going to stop this time because of a software error or a battery failure." Jake touches Little Jake's forehead. "You want it to be alive and part of you like you're alive. I want a human heart, Phil. Is that so crazy?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"No," says Phil. He leans forward and carefully lifts Little Jake and holds him. "Let me tell you what *I* want. I want my son to know his grandfather. I want him to grow up strong and straight and know you like I did. I want him to know who he came from and where he came from and why. I can't tell him that. Only you can." He breathes for a moment. "That means I want you to live, fake heart or pig heart. Doesn't mean anything to me."

Jake looks at him, startled. "You turned a little tough out there in New Mexico."

"Can't grow a thing without good seed. I got that from you."

"Not from Mr. Howe?"

"Gordie Howe and the sons-of-bitches who cloned him gave me my body." Phil leans over and touches the incision on Jake's chest. "Only you and Mom could give me a heart."

Jake doesn't say anything. "Okay. You win. The pig's heart, I guess. Better than some damned machine."

There is a moment of joy in the little room. The doctors, waiting only for permission, schedule the operation for the following afternoon. Jake kisses Little Jake and is then given a mild sedative. When he becomes drowsy, he is wheeled away from his family.

He never wakes up. An unexpected embolism causes a massive stroke during the surgery, and he dies.

Phil returns to the hotel in shock. Over the next few days, as they make plans for the dead, Phil says little. When Jake is finally and completely in the ground and they leave Carol to return to Albuquerque, Chela guides him carefully through the airports, ensconces him in the car, and drives them all home. For days afterward, Phil sits in the backyard, staring at the back fence. Over and over in his mind he wonders, if he had not forced the issue would Jake still be alive?

After a week or so, Phil starts to return to daily routine. He gets up early in the morning and plays with Jake until Chela gets up. When she wakes up some time later, the three of them have breakfast, and he goes to the shop. He tunes the machines for the electronic orders, programs tricky aspects of fabrication where necessary, and pounds steel himself when the automated systems are overwhelmed. By late afternoon, he is exhausted. When he gets home, Chela is already there, having picked up Jake from day care. The three of them have dinner together. Chela puts Jake to bed while Phil has a beer. Afterward, they sit together. Sometimes, they talk. Often, Phil says nothing, feeling empty from when he gets up in the morning to when he goes to bed. The guilt weighs sluggishly in his mind. He worries at it, walks around it, tries to ignore it, tries to move it out of the way. Like a boulder on the trail, it changes the path of his days.

One night, he mentions it to Chela. She is in the bathroom brushing her hair. Little Jake is asleep in a crib near the wall.

Chela stops and carefully puts down the brush. She comes into the bedroom and sits on the bed next to him, and says, softly and gently, "That's the stupidest thing I've ever heard."

Phil doesn't know what to think. "It might have made a difference. Or maybe it was just fate."

She shakes her head. "Your car could have broken down in Amarillo and we would never have met. Then, Jake wouldn't have come out here for the wedding after his first heart attack, which might have weakened him just

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

enough that he died in the surgery. Should you blame the *car?* Did the *car* make any difference?" She pauses and he waits for her to finish.

"It's chance," she says finally. "It's all chance. Chance you came through Portales. Chance you stayed and took the job with Frank. Chance I didn't get scarred in a car wreck when I was ten. Chance the kid I was with did. Chance I didn't meet someone before I met you. Chance you weren't with anybody at the time."

"Chance I met Esteban?" He smiles.

She smiles back. "Not quite. Esteban had been going to that bar for three years, looking for a husband for me. Finally, he found one that I could stand."

He barks a short laugh. "No! Really?"

Chela nods. "Absolutely. He figured he'd have a chance to look over everybody that came through town. He'd tried every other way since I was sixteen."

"Did he want a drunk for a son-in-law?"

"Did he get one?" she counters. "It was chance that brought you in there. Esteban took advantage of it." She lays a hand on his chest. "It's not your fault. It's not mine. It wasn't Jake's. It was just chance."

Phil plants a small garden like his father's back in Massachusetts. In the mornings, before Chela wakes up, he takes the baby into the backyard. Jake is five months old. The mornings are cool but not cold, and the baby lies on a thick blanket, watching Phil work in the dirt.

Phil finds himself talking to Jake. He talks about Gordie Howe, about the winters in Massachusetts, about a problem at work. He tells Little Jake about Grandfather Jake. He describes Jake to him, telling him about how he usually spoke evenly and slowly, with long silences between the sentences, and how it used to drive Phil crazy when he was growing up. He talks about Danny, and how crooked and broken he had looked on the outside, and how clear-minded he was on the inside, about the letters he wrote that Phil still keeps in a box in the closet. He talks about Chela, how he has never, for one single moment, been able to tell what she was going to do next. Still, as surprising as she is, she always seems to do the right thing. He tells the baby about learning Spanish, how the sounds felt in the mouth and on the tongue, how Phil couldn't understand Spanish and English at the same time, though it seemed Chela could. He talks about the desert and Portales and Albuquerque and Austin and Hopkinton, how the desert is so similar to Massachusetts in winter and so different, how the mountains had appeared to him when first he saw them, looking for all the world as if they were a great reptile lying sideways and at rest.

All summer he works in the garden and speaks to little Jake. Chela does not interrupt him though at times he sees her watching them in the window. As the baby turns over, then crawls, he starts to notice little mannerisms he had always associated with Jake: a turn of the head, a roll of the eyes, a clasp of the hands. He wonders how that can be; the baby never really knew Jake and there is no genetic contract between them. One day, he is in the bathroom washing his hands and he sees himself in the mirror clasping his hands in the same way. He stares into the mirror. He can see no resemblance between him and his father, but he realizes that's where he must have learned that movement. Little Jake must have learned it, and perhaps all of his grandfather's mannerisms from him. It comforts him as he

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

grieves. Jake Berger left no biological legacy to the world, but he lives on in what Phil has become, in what little Jake is becoming.

That November, Carol comes out to visit. She rents an apartment close to them and stays the winter. By April, she is ready to go back to Hopkinton.

Phil gives up his graduate classes at the university. He and Mishra form a partnership and the business doubles in size in just a few months. They hire new staff and still have too much business. Gradually, they find themselves brokering whole jobs to other fabrication firms around the country.

Chela, for her part, is in more and more demand for digs in the area. She has become adept at relations between the Southwest tribes and the archeologists. All Indians have strong taboos about disturbing the dead, and most have a deep and justified distrust of archeologists. Chela has over the years earned the respect of the Navajo and Hopi, among other tribes, and is trusted by them. This has become her archeological specialty.

Phil and Chela look for a larger house, one with an adjoining apartment, and find one close to the shop. That November, when Carol comes down for the winter, they are ready for her, and she has her own place upstairs for the next five months.

Jake grows into a quiet, serious little toddler. Given to smiles rather than laughs, he talks early, and likes to help dig in Phil's garden. Phil can keep the damage down to a minimum most of the time, but over the season there are shortfalls as Jake learns to distinguish broccoli from Brazilian pepper and tomatoes from toadflax. Each day as he watches Jake, he learns something about his own father or about Chela. The boy reflects his mother like the moon reflects the sun. Phil is grateful whenever he sees something of himself. It surprises him that he doesn't feel upset that Jake takes so much after Chela and so little after himself. When he mentions this to Chela, she says he just doesn't see it. Jake takes after Phil all the time.

Phil's grief crusts over and smooths itself as time passes. He discovers himself feeling happy for no apparent reason. He finds that surprising, and the surprise itself is disconcerting. Was I unhappy all these years? He's not sure.

Phil and Chela measure time in terms of Jake: Jake was five months old when his grandfather died, we bought the house when Jake turned one, we took such and such a trip when Jake turned two.

The week before Jake turns three, Chela is involved in some delicate negotiations between the Navajo, Hopi, and Paiute tribes over an archeological dig in the mountains near Colorado. That Friday, she races home from Shiprock on Interstate 64. It's a pitch-black, moonless night. Her car slips on the icy bridge in Waterflow, over the Westwater Arroyo. The car tumbles down the ravine and lands upside down. Chela is killed instantly.

Act IV

Little Jake is in bed asleep when the policemen come and notify Phil. Phil immediately knows what has happened, without being told. There is a vast, cavernous silence that has opened up in the world, and everything seems distant, unreal, cold.

After they leave, he sits in the dark next to the phone. I should call Esteban, he thinks. I must pick up the phone and call Esteban. But he can't

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

make himself move his hands, can't make himself stand. Carol. She's just upstairs. Call her. But he can't even turn his head. The only sound he can hear is the sound of Jake's sleepy breathing from down the hall, in and out. It seems as if death has been taking slow steps toward him all his life. First, Danny. Then, Jake. Now, Chela. Little Jake breathes in a slight whistle. Phil wonders if it will stop. What would he do if Jake were to stop breathing? Would he be able to move then? Or would he stop breathing himself?

I could die right now, he thinks. I could just let go and drift away. Did she feel that way?

It seems that Jake's breathing is the only thing holding him to the earth at all.

He can see in his mind the highway through Waterflow. He has driven that road before. He can see the patch of ice forming on the bridge, sees Chela hitting the patch and the car turning, Chela panicking and trying to regain control.

I never taught her to drive on the ice, he thinks to himself. I never saw the need.

There is a hitch in Jake's breathing as the boy starts to wake with the dawn. Phil shakes his head and stands up, able to move at last. First, he calls Carol and tells her. Then, he washes his face in cold water. He picks up the phone and dials Esteban's number from memory.

"Esteban," he begins in Spanish. "There has been an accident."

After that, he waits for Jake to wake up.

Phil is struck by the dull tedium of death. As when Chela and his mother buried his father, there are endless details to be addressed. How is Chela to be buried? Should she be cremated? Where is it to take place? What kind of coffin? What kind of urn?

Matia, looking old and sad and grand, takes over. The funeral is a large and colorful affair to which Jake feels no kinship at all. She knows which relatives to notify, how to drape the casket, what flowers to send to which church. Esteban's sole task is to grieve with Phil. Phil's sole task is to grieve with his son.

Little Jake does not cry immediately when he is told. He asks again when Mama will be coming home. Each time, Phil starts the story again. Mama has gone away. She won't be coming back. She will always love you, but she can't be here any more. Jake listens, blue eyes intent. Then, he asks again.

By the time of the funeral, Jake has stopped asking. He does everything asked of him without complaint or comment. Not much is asked. He submits to every caress, hug, and embrace as if he were somewhere else. Only his clenched grip on his father has any life to it. It is so strong that Phil has to change hands often.

Once the immediate death tasks are done, Phil must manage the lesser tasks. He settles the insurance, makes sure the deed to the house is in proper order. When the insurance check comes in, he pays off the mortgage of the house. The rest he puts in a trust account for Jake. Mishra calls him to see if he's all right. He asks when Phil is coming back to work. Never, Phil wants to scream into the phone, but instead says he doesn't know.

He spends all of his time with Jake and Carol. Jake had crawled into bed with Phil the night after the accident. Phil hadn't the heart to put him back.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Now, each night, Phil wakes up to find Jake nestled spoon fashion against his chest.

Finally, after a month of mourning, he goes back to the shop. Standing there surrounded by automated machines, he realizes that he never wants to be here ever again. He walks into the office and sits down across from Mishra.

"Buy me out," he says quietly.

Mishra reaches into the drawer and pulls out a document and gives it to him. "I thought you might feel that way."

It is something he and Jake discuss, as much as a thirty-eight-year-old man can discuss anything with a three-year-old boy. When Carol leaves in the spring, they sell the house to follow her to Hopkinton. Matia and Esteban come up to see them off.

"You'll be back," says Esteban, looking up at him. He touches Phil on the chest. "We are in your blood."

Phil nods in agreement. "Someday." It's all he can bring himself to say.

He hugs them three or four times. They can't hug Jake enough. Finally, Jake, Carol, and Phil get in the truck, and the three of them start the long drive to Massachusetts.

This grief is harder to bear than the death of his father. This has unnaturalness to it, bitterness, a sense of outrage. On the trip to Massachusetts, Jake sees the Grand Canyon for the first time. Watching his son marvel, Phil feels he is witnessing Little Jake for two people, himself and Chela. He must see things for her as well as for himself. When they stop for a day to play in the park next to the Mississippi, he tries to see it as Chela might have seen it, for the first time. He wonders how Gordie Howe must have felt when his wife died.

When, at last, they come to the old house in Hopkinton, it is early summer and the lawn and gardens are overgrown. It is so different from New Mexico. He wants to feel as she might have, coming from her ancient Spanish ancestors, to see this place as fresh and new.

There are gaps of time over the summer and fall. A month might pass where he remembers nothing except what happens to Jake. It is as if Phil is only alive through Jake's eyes and fingers.

Jake's fourth birthday marks the anniversary of Chela's death. Phil acts purposefully unexcited about the prospect. He is determined that Jake's birthday not be permanently marred by the death of his mother. With Carol, Phil puts together a small party composed of Jake's new friends and their parents. The day before the party, Phil finds Jake in the living room, standing before the old and beaten piano. The orange paint is just as ghastly against Carol's New England wallpaper as it had been in New Mexico. Jake's right hand is resting on the keys but not pressing them down, as if he were trying to feel the weight of the music in them. Tears are falling down his cheeks.

"Jake?" calls Phil softly. "What's the matter?"

Jake draws his hand across the keys gently without making any sound. "Mama liked to play the piano, didn't she?"

Phil comes and sits on the floor next to him. Jake doesn't take his hand from the keys.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"Yes," Phil says.

Jake lets his hands fall and crawls into Phil's lap. "I want to play, too," he says. "Can I learn?"

Phil can barely speak. "Yes."

When Jake starts kindergarten, Phil is at a loss for what to do with his time. As long as he can work outdoors, he works on Carol's house. Carol is nearing eighty now. Though she is still strong, the years have taken their toll. Phil builds an enclosed wrap-around porch for her and Jake.

Over the fall, Phil and Jake have fallen into the habit of getting up early, before the bus, and walking along the lake in the park nearby. Phil guards these times jealously. It is his favorite time with Jake. This year, the winter grows cold early and snows late, so that when Christmas rolls around, the lake is flat ice in all directions. In the distance, they can see kids playing pond hockey. Phil leans down to the edge of the lake. Under the initial sandpaper, the ice is hard and smooth. Perfect hockey ice. Thoughtfully, he stands again and replaces his glove.

Jake is looking at the game in the distance. "Let's go watch them."

Apprehensive but agreeable, Phil follows Jake around the edge of the lake until they are close to the boys. The scene is uncomfortably close to Phil's childhood, and he coughs nervously.

"That's hockey?" Jake asks.

Phil nods, thinking Jake must have heard about hockey in school. Hockey hasn't been mentioned around Phil since before Jake was born.

"Did you ever play?"

Phil looks down at Jake. The blue eyes are all that he can see of himself in the boy. The rest is Chela's.

"Yes," he says finally. "A long time ago."

"Were you any good at it?"

Phil nods. "I was pretty good. I haven't played in a long time."

"Is it fun?"

"It's like flying." He thinks a moment. "It was the most fun I ever had as a boy."

Jake thinks for a moment. "Why did you quit?"

Phil shrugs. "It's complicated. I had to leave home. I had to grow up. All that meant I had to quit."

Jake thinks about that for a moment. "Can you teach me?"

Phil looks down at him. The nervousness and apprehension fall away. Christ, it's been over twenty years! I'm a forty-one-year-old man. Isn't it time I let that go?

"Yes, I can."

He's rusty on skates, but, after a few days of practice, sore muscles, and several bruising falls, he starts to remember his skill. It is as if a long dormant muscle is awakened. He finds himself enjoying skating again.

Jake learns to skate easily and is soon asking to play hockey. Without quite knowing how it comes about, Phil finds himself the team coach. They are a motley collection of five- to seven-year-old children, and he's not sure he's up to the task. They have a good, though unspectacular, winter season. Phil continues coaching over the summer season.

Each hot summer morning, he finds himself looking forward to coaching them with an eagerness that feels brand new. Every Tuesday morning, he

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

is on the ice, carefully teaching them how to skate, how to hold themselves, how to keep their balance when they bump into each other. The mite league doesn't allow checking; that comes later, when they eventually graduate to the peewee league. But Phil keeps it in mind. If they stay with it, the shift won't take them quite so off guard.

There's a coterie of parents and watchers there every morning. Most of them he gets to know, since they're the parents of the kids on his team. He learns to deflect their anger and advice, their yells and threats. Twice he comes close to fights, but manages to avoid them. His size and manner keeps the worst of them at bay and reassure the rest. Of course, it doesn't hurt that his team is doing pretty well in the league.

One old man keeps coming and watching them. He was big-framed once, but has now gone to seed. His clothes are dirty with stains around the elbows and knees. Phil can always tell when he comes into the arena, because the air suddenly smells of tobacco. The man never smokes but the smell is so embedded in his clothes that it travels in the ice-pure air of the rink. He has no connection to any of the kids and Phil keeps an eye on him, just in case the old man is thinking something unsavory. More likely, he thinks, it's just to escape the heat. Over the weeks, Phil begins to think that he might know the old man, but he can't remember from where.

In August, near the end of the season, the old man waves to Phil as the practice session starts. Curious, Phil skates to the stands.

"What can I do for you?"

The old man coughs for a moment and delicately wipes his lips. "Thought we should talk. I'd like to see you after practice." His voice is faint but measured.

Phil shrugs. "Sorry. I have plans. Maybe next week—"

"I don't think so." He smiles faintly. "My time is precious."

"So's mine. I'm sorry to disappoint you—"

"I thought you'd want to talk to me."

Phil looks at him closely. There is still that sense of nagging familiarity but he can't place the old man. "Do I know you?"

The old man nods knowingly. "I'm sorry. I thought you'd recognized me. I'm Frank Hammett."

Phil stares at him for a long moment, then breaks away and looks back at practice. "Okay. Why now?"

Hammett coughs. " I have emphysema. Next week I might be dead."

Phil sends Jake home with one of the other kids and promises to come and pick him up as soon as he can. He sits across from Hammett in the restaurant above the rink. Frank passes a cup of coffee toward him. "It's still early in the day. Thought you might need this."

"You know," Phil starts, then stops. Starts again. "I thought for years what I might say to you if I ever met you. Now I don't know what to say."

Hammett grins and chuckles, then coughs. "Overcome by me in the flesh, eh?"

"Hardly."

Hammett nods. "Not easy to know what to say to the guy that ruined your life."

"You didn't ruin my life."

Hammett shakes his head. "Hey, don't mess with history! I was there. I saw you playing back when you were in the pee-wees. I knew in time you'd

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

make it at least to the minors. Then, I broke the story and it forced you to leave. Don't try to absolve me of what I did."

"I'm not." Phil looks at his hands for a moment. "I had a life before you broke the story. I have a life now." He thinks of little Jake, of Chela and Esteban, of Carol and his father. "Nothing was ever ruined."

Hammett grunts. "I see. That is some small comfort, I suppose."

"Did you know about me all that time?"

The old man shakes his head. "No. I watched you since you were a kid. But I watched a lot of kids. About a month before I wrote the story, I got an envelope in the mail with a set of DNA chromatographs. One set for Gordie Howe. One set for you. I had a friend in the Boston Police Department verify them in the national database." He starts to fumble in his pocket for a cigarette, stops, and lays his hands on the table. "So I ran the story."

"Why?" Phil leans across the table. "Why did you run it? You must have known what it would do to me."

"I thought you said it didn't ruin your life."

"That doesn't mean it didn't hurt."

Hammett nods and looks out the restaurant window onto the ice. An adult team is practicing drills. "I ran it because it was big news. I ran it because I figured that I couldn't be the only one with the information, and I didn't want to get scooped. I ran it because if I got a good story and I could milk it right, I'd get off the damned Middlesex service and onto the *Globe* staff. Why the hell did you think I ran it?"

Phil settles back in his chair. He shrugs. "All those reasons, I guess. Who sent the chromatographs?"

Hammett spreads his hands. "I never found out. I looked—I hear you looked, too. Dalton looked harder than both of us put together. Whoever did it covered his tracks extremely well and then let seventeen years destroy whatever was left. By now, the trail is so cold we'll never know."

"Why did you come here?"

"I came here to give you a piece of my priceless wisdom," Hammett snaps. He pulls an ancient, bulging envelope out of his jacket. "And to give you this."

Phil opens it and pulls out a collection of pictures. Each one is a study in blacks and grays, barred and spreading into one another. "The chromatographs."

"I figure I owed you at least that much."

Phil stares at the pictures. He'd seen pictures like this before, when Robinson had compared his DNA against Gordie Howe's, his own and Chela, compared against little Jake the day after he was born. But these were the originals that had changed his life. They felt heavy in his hands. Gently, he put them back in the envelope.

"Thanks, Frank," he says sincerely.

Hammett waves him away. "I don't regret what I did. But I wish it hadn't been so hard on you."

They sat wrapped in silence for a while. Phil sips his coffee thoughtfully.

"You said you had emphysema?"

"Yeah," Hammett says shortly. "Both lungs shot and I'm a poor transplant candidate."

"Nobody's a good transplant candidate." Phil thinks of his father and drinks his coffee. "Why do you think they did it?"

"Which? Clone you or send the pictures to me?"

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

"I don't know. Both, I guess."

"Good questions," Hammett says. "I've been considering those very questions for over twenty-five years. I still don't have an answer, but here's what I know. The cost of the cover-up, large as it must have been, is a whole lot less than it must have taken to clone you in the first place, so whoever did it had resources. They didn't do just anybody. They chose a minor celebrity. A man people might know, but not an overwhelming star. Since no one is a villain in their own mind, we've got to figure they thought they were doing something good. So, they cloned you and kept you a secret for a long time. Then, selectively, they revealed you. Just you. Maybe you were the only one. Maybe there were hundreds of attempts. Hundreds of Howes. Maybe not—a lot of people tried to see if they were Gordie Howe after the feeds picked you up. But you were the only one reported and you were the one they exposed. Who knows what other people they might have cloned?"

Phil realizes that Hammett never found out about Danny. He resolves not to reveal that secret now. "Go on."

Hammett works his hands in front of him like a man building a house. "The rest is speculation. Maybe they cloned you because they wanted to know before anybody else if it could be done. Or it could have been for future profit, or some rich old man's fancy. Once it was done and the secret kept, they had an ongoing experiment they could watch for years."

"Why Gordie Howe?"

"Why not? If you're going to go through all that expense, who should you clone? Some unknown guy from Medford?" Hammett shakes his head. "Once you're going to make the investment, it makes sense to choose somebody important. They wanted Howe for some reason, and got him."

Phil nods. "Okay."

"Then, when you're seventeen years old, they reveal you. That's the interesting part." Hammett stops and drinks some coffee, swirls the cup for a moment, gathering his thoughts. "Britain okayed human cloning research in 2000 as long as it didn't go to term. The USA was much more restrictive. A bunch of people in Italy cloned some kids for a few couples and it was a complete disaster. By the time you were in high school, nobody was cloning anymore, but the research had gotten almost routine and the payoffs were big: continuing stem cell lines, natural skin and corneas, a cure for myopia, transplant organs. People were starting to talk all over again about getting past the birth defects and other problems and starting human clone lines. Then, you were revealed and the debate changes. It's not abstract anymore. Your career was over and you disappeared. But the debate went on. People who were ready to roll on cloning projects were suddenly putting on the brakes. Until, years later, we're sitting here and clone lines aren't even discussed anymore."

Hammett leans on his hands, his face close to Phil's. "When people first started buying cars, they drove them like they were buggies. They didn't care about the sides of the road. There weren't any stop signs or seat belts. Drivers were so unsophisticated they thought getting out of the way compromised their manly pride and preferred head-on collisions. People had to live with cars for years before they were smart enough to properly navigate a city street. Fifty years after cars were invented, you could certainly drive the wrong way down a one way street but only a fool or a drunk would do it."

He waves his hand in the air. "It's the same thing. Sure we could clone people now, and if you're willing to wait the twenty years or so for them to

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

grow up they might somewhat resemble their clone parent. But we don't need to clone people. The way clones work is part of the world consciousness. The only reason you ever would clone a person is to get *that person* as a clone. You, Phil Berger, proved that was a pipe dream. You are *not* Gordie Howe, regardless of how much I ever wanted you to be. Now, we *all* know that: a clone isn't a copy of the original. Its heritage is strong, but ultimately it's just another person. Back when you were seventeen, that knowledge wasn't part of people's thinking." Hammett stops, struggling for breath.

Phil leans back and laughs. "Calm down, big guy! So, you think they were doing us a favor?"

Hammett rests his hands on the table and smiles. "I think they were trying to buy us time until we were smart enough to drive on the right side of the road."

"Then who could they have been?"

"Lord only knows, Phil. But they were smart. They figured us out root and branch."

It's early morning in February. The sky is still dark. Phil parks his car in front of the rink and waits until the manager opens the door. He hefts his equipment out of the back and follows him into the locker room. As always, he's the first member of the team to arrive.

He quickly dons the equipment: shin pads, skates, and pants, elbow pads, shoulder pads, helmet and gloves. He leaves the locker room and steps out on the ice, warming up. He likes these first moments alone on the ice. It makes him reflective.

This is adult recreational hockey, not the NHL. He's forty-nine, not eighteen. He wonders, not for the first time, what his life might have been like if he had never been revealed. Would he have been another Gordie Howe? Would he have had any career at all? It's all chance, Chela said. He thinks of her. He thinks of Danny.

After this morning's game, he will pick up Jake and take him to middle school. He's lucky to have Jake. He's lucky to have had Chela. And now, he's lucky to have the ice again. But then, he thinks, the ice was always there.

After he warms up, he stretches. Then, he takes off his glove, kneels, and draws his fingertips across the surface.

It is smooth and hard; perfect hockey ice. ❍

VISIT OUR WEBSITE
www.asimovs.com
Don't miss out on our lively forum, stimulating chats, controversial and informative articles, and classic stories.
Log on today!

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

ON BOOKS

Peter Heck

CHASM CITY
by Alastair Reynolds
Ace, $23.95
ISBN: 0-441-00912-3

Reynolds made a big splash with his first novel, *Revelation Space*. A sweeping epic set in a vividly imagined future, it clearly marked him as a writer to watch. Along with the likes of Stephen Baxter, Paul McAuley, and Ken McLeod, Reynolds synthesizes the excitement of vintage space opera with the brains and polish of the best modern work. Taken as a whole, their work clearly outlines the SF mainstream at the beginning of the new century.

The new novel is set in the same universe as *Revelation Space*. Reynolds sets the scene by quoting a tourist brochure for the Epsilon Eridani system, where Chasm City is located. Some catastrophe called the Melding Plague has turned what was once one of the jewels of the galaxy into a zone of random destruction. The plague didn't attack people—at least not directly—but instead targeted the nanomachines that sustained advanced civilization, including the very buildings of Chasm City. Not content with mere destruction, the plague actually transformed the buildings into new and bizarre configurations, almost as if it were creating some alien art form from the destruction.

When the action opens and we meet two men in pursuit of a fugitive, it is clear that the flight and pursuit will take them to Chasm City. The narrator, Tanner Mirabel, is a professional hunter, and the man he and his partner are pursuing is Reivich, who apparently killed Tanner's previous employer. (The reader gradually learns that not everything Tanner remembers is entirely reliable.) Almost before he realizes it, Tanner is headed off-planet aboard a ship to Epsilon Eridani—just enough behind his quarry to put him at a major disadvantage upon his arrival.

At this point, several complicating factors arise, making digressions into the past necessary. The histories of the ambush in which Tanner's employer died, of Sky's Edge (the war-torn planet of their origin), and of the fleet of generation ships that settled their world turn out to be of key importance in understanding what is happening. Tanner learns that he is infected with a virus that turns him into an avatar of Sky Haussman, a starship captain who combined extraordinary heroism with inhuman villainy during the settlement of Sky's Edge.

Meanwhile, he has to cope with the complex and hostile society of Chasm City if he is going to survive to confront his quarry. Reynolds gives the city a variety of edgy subcultures, most of which view Tanner as a victim to be exploited and gotten rid of with no further ado. Surviving them takes all his carefully honed hunter skills, as well as a knack for spotting just when an apparent ally is about to turn traitor. At the same time, the whole sordid tale of the founding of Sky's Edge plays itself out in his consciousness as the virus infection runs its course.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

At the end, Reynolds splices together the hunt for Reivich, the saga of Sky Haussman, and the backstory of the murder of Tanner's previous employer into a virtuoso ending reminiscent of Alfred Bester.

Reynolds' second novel is even more fun than the first; full of action, worldbuilding, myth-making, and all the plot surprises the author can concoct. If you're wondering where good old space opera has gone to, wonder no longer: Reynolds is doing it as well as anybody in the business.

THE ALCHEMIST'S DOOR
by Lisa Goldstein
Tor, $23.95
ISBN: 0-765-30150-4

Goldstein's latest takes place in the 1580s, early in the rein of Elizabeth I of England. Dr. John Dee, the most famous English alchemist of the renaissance, journeys to the continent in hopes of escaping a demon he has inadvertently summoned.

Dee is accompanied by his wife Jane and their children, and by Edward Kelley, his assistant—whose main value to Dee is his ability to view distant and future events in a crystal stone. But Dee finds himself in trouble over Kelley's prophecies that Prince Laski, a Polish nobleman, will soon come to the throne—prophecies that show no sign of coming true. Faced with growing impatience by Laski, Dee takes his entourage to Prague, where Emperor Rudolf is reportedly consulting all the alchemists and sages he can find. In Rudolf's anteroom, Dee meets Rabbi Judah Loew—the most accomplished Kabbalistic scholar of Europe. Loew is puzzled by an inexplicable recurrence of the number thirty-six in his life. Dee is unable to help him, but he does discover signs that Rudolf is mad—and that his ambition is likely to prove dangerous to everyone around him.

At this point, the plot becomes complex. Dee discovers that, as he had feared, the demon has followed him to Europe—although Loew helps him temporarily banish it. For his own part, Loew decides that the number plaguing him is related to the legend that the world depends on thirty-six righteous men, and that one of them must be in danger. Kelley finally shows his true colors, betraying Dee to insinuate himself into the emperor's favor. At the same time, Loew convinces Dee to help him in the creation of a golem, an artificial but soulless man who can help him with his various tasks. Dee, temporarily exiled from Prague, travels to the Hungarian court, where he meets the uncanny Countess Bathory, who is reputed to bathe in the blood of virgins. In the end, all the disparate elements come together to produce a more than satisfactory conclusion that pretty clearly precludes any sequels—a pleasant change from the fad for interminable fantasy series.

Goldstein presents all this in a quiet, matter-of-fact style, revealing the alienness of the landscape and its people largely through the phlegmatic Dee's reactions. A number of historical figures make appearances, and the settings are deftly drawn without detracting from the characters. Central Europe has not been a favorite setting for fantasy (with the notable exception of *Dracula* and its derivatives). Likewise, the fashion for medievalism has steered many talented fantasy writers away from the renaissance, a period every bit as fascinating, and with its own exotic blend of magic and myth. Goldstein goes a long way to show what her predecessors have missed.

This book is strongly recommended for readers looking for character-rich fantasy that breaks out of the medieval mode.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

CHARISMA
by Steven Barnes
Tor, $25.95
ISBN: 0-312-87004-3

Barnes' latest novel posits an innovative day care program designed to give disadvantaged children a chance to realize their full abilities. What nobody expects is that the products of the program will become a good deal more than simply gifted students. . . .

In other words, *Charisma* takes a new look at the theme of the superhuman child, which has a long and honorable history in SF. In Wyndham's *Midwich Cuckoos* or Clarke's *Childhood's End,* visitors from another world are the primary cause of the children's sudden alteration; in Sturgeon's *More Than Human* or Bear's *Darwin's Radio* the cause is a sudden leap in evolution.

The main story begins in Claremont, a smallish city in Washington, where a scandal centering on alleged abuses shuts down the local day care. We learn that several of the former students are now in their early teens. Among them is Patrick Emory, whose mother runs a costume shop, and is about to break up with his father, a factory worker. Patrick and his friends have a strong bond that arises from their day care experience, which included martial arts as well as fundamentals of the arts and sciences. Their difference from their peers may not be obvious to a casual observer, but Barnes quickly makes it clear that they are working on an intellectual level far above most of the adults around them.

Not that they are without problems. . . . For all the benefits of their training, they still live in a hostile environment. A group of outlaw bikers have moved into Patrick's development, and are systematically eliminating everything and everyone they perceive as a threat to the drug ring that provides their living. When the bikers notice Patrick and his friends meeting on land near their clandestine methamphetamine laboratory, the youngsters—and their families—become targets.

But they have unwittingly come to the attention of even more dangerous enemies. We learn that the day care centers took as their model a successful black entrepreneur, Alexander Marcus. Marcus founded an impressive media empire, and was widely talked about for national political office, before his untimely death. But behind Marcus's success were several ugly secrets—known only to his inner circle. The surviving members of that inner circle have become aware of the graduates of the day care program, and consider them threats. And their resources are far more extensive than those of a biker drug gang.

Barnes convincingly portrays the kids and their more mundane parents and the other adults in the world, and builds the tension effectively as the threats against the very likeable kids mount. A real page-turner from one of the most accomplished (and too often overlooked) storytellers in the business.

KAREL CAPEK: Life and Work
by Ivan Klima
Translated by Norma Comrada
Catbird Press, $23.00 (hc)
ISBN: 0-945774-53-2

If the Czechoslovakian writer Karel Capek (1890-1938) is known at all nowadays, it is as the author of the play "R.U.R." ("Rossum's Universal Robots"), in which he coined the modern word for what earlier eras would have called a mechanical man. Those who have read somewhat in SF history know a bit more: Capek was one of the leading European writers of SF in the era between the World Wars, the author of such provocative satiric works as

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

The Absolute at Large and *War with the Newts.*

But in recent years, SF in languages other than English has been of minimal interest to American publishers. Moreover, satire written in the twenties and thirties seems less and less relevant to the modern world. Perhaps inevitably, Capek's reputation has faded. Comparatively few Czechs—and far fewer Americans—now know that he was once among his country's most famous writers, a name seriously mentioned during his lifetime as a possible Nobel Prize winner. In this new biography, Klima undertakes to redress that neglect.

Capek first came to prominence as a young man in the years preceding World War I; he and his brother Joseph arrived in Prague as an inseparable couple, already well versed in the work of the modernist school in the visual arts. The brothers had visited Paris in 1911, and upon their return to Prague, they set about bringing the artistic revolution to their home country. Klima shows the brothers establishing themselves as writers, at first largely in collaboration but increasingly doing separate work. He covers Karel Capek's fairly modest non-literary career—Capek, like most authors, spent the majority of his time sitting in a room quietly writing. The book gives brief summaries of all Capek's major work, and a complete list of what is available in English translation. A fair amount of the list could easily be construed as SF or fantasy of one sort or another. But Klima makes no attempt to judge the work on its merits as SF; he is far more interested in Capek as Czech nationalist and as an explorer of new literary modes.

As a result, readers who think of Capek primarily as an SF writer may be disappointed at Klima's emphasis. But while Klima's failure to take note of Capek's SF contemporaries may seem a shortcoming, it is really a matter of perspective. In fact, it seems presumptuous to gerrymander Capek posthumously into a genre he was largely unaware of. Capek undoubtedly knew the work of European SF pioneers such as Verne and Wells. But he seems unlikely to have encountered the American pulp magazines of the twenties in which genre SF was molded. And one wonders whether he would have found them of much interest if he had stumbled across them.

The sfnal devices found in Capek's best-known work should be taken primarily as evidence of his active imagination and his willingness—shared with such of his countrymen as Franz Kafka—to abandon realistic technique when there was a shorter way to achieve the effects he sought. Klima's account of Capek's early years makes it clear that he was very much a modernist, interested in the Cubists and others who were laying down the new esthetic that swept through all the arts in the second decade of the twentieth century. The issues that primarily concerned him were those of his time: the struggle to create a new society in the wake of World War I, and then the struggle to prevent the slide into chaos that led to World War II.

Does this mean that Capek's work "isn't really SF"? The answer depends on how widely we're willing to cast our nets. If we exclude him, we must exclude many other European writers whose work owes little to the American pulp tradition. As noted, the commercial SF publishers have already made their opinions clear. But by that logic, many names from earlier eras of American SF could as easily be wiped from the slate. One wonders how much luck a new Cordwainer Smith or R.A. Lafferty would have finding a publisher

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

nowadays. In any case, it is good to see a fresh evaluation of this pioneering writer, which with luck will lead others to look at Capek's place in SF history more carefully—and, most important of all, to read the works that make Capek of interest to begin with.

THE TURK
by Tom Standage
Walker, $24.00
ISBN: 0-0827-391-2

Mechanical men didn't begin with Capek's robots. There were at least two in Oz—Tik-Tok and the Tin Man—just to mention one notable fictional predecessor. And in real life, there was the curious "automaton" best known to Americans as Maelzel's Chess Player, after a famous essay by Edgar Allen Poe. Now Standage, who has made a specialty of breezy histories that examine the impact of technology on popular culture, turns his spotlight on one of the outstanding curiosities of Europe and America in the late eighteenth and early nineteenth centuries, the Turk (as its contemporaries knew it). This famous device raised the question whether a machine could be constructed to perform such higher intellectual functions as playing a winning game of chess.

Not surprisingly, the Turk's long career intersected many significant currents in the intellectual history of its time, and foreshadowed many in more recent times. Now as then, chess has a reputation as one of the most challenging mental activities, drawing on its players' memory, judgment, and calculating ability to solve complex problems. When a specially programmed IBM computer defeated then-World Champion Garry Kasparov in a short match, it made headlines in papers that almost never waste ink on non-contact sports.

The Turk originated in an era when the European aristocracy was infatuated with mechanical toys. Standage takes the time to fill in the background, paying particular attention to Vaucanson, a French inventor whose mechanical duck was one of the wonders of the age: it ate, drank, swam, and flapped its wings—with no more sophisticated mechanism than clockwork. It was a display by one of Vaucanson's countrymen that inspired Wolfgang von Kempelen, a gifted engineer and civil servant in the court of Austria, to boast that he could produce an automaton far more startling than anything seen so far. And so, in 1770, he unveiled the chess-playing Turk—which immediately became a sensation.

Kempelen took the Turk on a triumphant tour of European capitals where it played against many of the famous men of its time—including Benjamin Franklin and the French musician François Philidor, generally believed to be the strongest chess player of his era. The Turk was no match for Philidor, but it easily defeated most of the gentlemen dilettantes it encountered during its exhibitions. There was considerable speculation as to its mode of operation—and several writers published their conclusions, including several who suspected a human operator hidden inside the figure. But to Kempelen, the automaton was at best a side interest, and he longed to return to his regular duties and researches in engineering. At last, in 1785, he finally retired the Turk—and the story might have ended there.

The Turk gathered dust in a Vienna storeroom for twenty years, during which it figured prominently in fiction and legend (including an apocryphal appearance in the court of Catherine the Great). Around the time of its inventor's death, it was purchased by Johann Maelzel,

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

whose primary claim to fame was his invention of the metronome. Granted an audience with Napoleon in 1809, Maelzel displayed several of his inventions, including artificial limbs designed for wounded soldiers, and then brought out the Turk. The Emperor considered himself a bit of a chess player, but the automaton proved better. This set it off on its second career, impressing audiences throughout Europe and the Americas.

Standage gives an entertaining summary of Maelzel's tours with the Turk, including its encounters with various luminaries and chess champions. He is also careful to put its cultural impact in perspective; it, and other automata on display in Maelzel's exhibit, are likely inspirations for Babbage's attempts to build the first true computer, as well as for Barnum's later exhibitions. He does reveal the secret of the Turk's operation—not really a secret, since many had guessed it over the course of its operation—at the end of the book. Among the surprises to this reader were the names of several eminent nineteenth century chess players who served as the brains of the Turk at one time or another. Perhaps the only disappointment is that none of the Turk's games (surely some have survived) are included—although that may not be the author's choice.

An enjoyable romp through history, made more enjoyable by its cast of celebrities and rogues. Recommended especially to history buffs and chess aficionados. ○

CUSTOMER SERVICE OR SUBSCRIBER ASSISTANCE

Please direct all changes of address and subscription questions to:

ASIMOV'S SCIENCE FICTION
P.O. Box 54033, Boulder, CO
80322-4033

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

INDEX

This index covers volume 26 of *Asimov's Science Fiction* magazine, January 2002 through December 2002. Entries are arranged alphabetically by author. When there is more than one entry for an author, listings are arranged alphabetically according to the story/article title. All entries are followed by a parenthetical note: (a) article; (c) cartoon; (ed) editorial; (na) novella; (nt) novelette; (p) poem; (r) review; (se) serial; and (ss) short story. Collaborations are listed under all authors and are cross-referenced. When a title, a parenthetical note, or an author's name is omitted, it is the same as that of the previous entry.

Abraham, Daniel—
Gandhi Box (ss) ..... Jan 36
Ghost Chocolate (ss) ..... Aug 88
Allison, Tavis—
In Father Christmas's Court (ss) ... Dec 70
Arnason, Eleanor—
Knapsack Poems (ss) ..... May 10
The Potter of Bones (na) ..... Sep 12

Baker, Kage—
Hanuman (nt) ..... Apr 84
Her Father's Eyes (ss) ..... Dec 84
The Likely Lad (nt) ..... Sep 60
Barton, William—
The Engine of Desire (na) ..... Aug 98
Benford, Gregory—
The Clear Blue Seas of Luna (nt) ..Oct/Nov 132
Boston, Bruce—
Arbitrary Night in the
University Lab (p) ..... Feb 129
Eight Things Not to Do or Say
When a Mad Scientist Moves
into Your Neighborhood (p) .... Jul 81
I Talk to the Trees (p) ..... Aug 39

Cadigan, Pat—
Linda (nt) ..... Jul 60
Clark, G.O.—
Europa (p) ..... Jan 81
Paws (p) ..... Sep 59
Cooper, Brenda
(with Larry Niven)—
Free Floaters (nt) ..... Aug 58

Daniels, Keith Allen—
Anachronism (p) ..... May 77
Paperweights of the Gods (p) ..... Jan 8
Television Isn't Heaven (p) ..... Mar 129
Dellamonica, A.M.—
A Slow Day at the Gallery (ss) ....Oct/Nov 158
Di Filippo, Paul—
On Books (r) ..... Feb 130
——— ..... May 132
——— ..... Aug 132
——— ..... Dec 132

Disch, Tom—
A Record High (p) ..... Jun 65
No More Prisons (p) ..... May 47
Dozois, Gardner—
A Misspent Life? (ed) ..... Oct/Nov 4
Duntemann, Jeff—
Drumlin Boiler (nt) ..... Apr 62

Esaias, Timons—
Nudge Toward Libration (p) ..... Apr 101

Friesner, Esther M.—
Men in the Rain (nt) ..... Jan 68
Frost, Gregory—
Madonna of the
Maquiladora (nt) ..... May 56

Garcia y Robertson, R.—
Ring Rats (na) ..... Apr 102
Garey, Terry A.—
Mars Terraformed (p) ..... Mar 81
Garratt, Peter T.—
When the Night Is Cold (and
the Land Is Dark) (nt) ..... Apr 44
Gloss, Molly—
Lambing Season (ss) ..... Jul 82
Grimsley, Jim—
Getting the News (ss) ..... Mar 82

Heck, Peter—
On Books (r) ..... Jan 132
——— ..... Apr 137
——— ..... Jun 136
——— ..... Sep 136
Hendrix, Howard V.—
Incandescent Bliss (ss) ..... Jun 66

Ings, Simon—
The Convert (nt) ..... Dec 8
Irvine, Alex—
Before We Hit Bottom (p) ..... Sep 135
LaGrange Point (p) ..... Feb 79

Jarpe, Matthew—
Captains of Industry (ss) ..... Mar 34

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Jasper, Michael—
Natural Order (ss) . . . . . Jul 42

Kelly, James Patrick—
Candy Art (ss) . . . . . Dec 36
Luck (nt) . . . . . Jun 14
On the Net: Cons (a) . . . . . Jun 9
——— Michael Swanwick by James Patrick Kelly (a) . . . . . Apr 9
——— Movies (a) . . . . . Feb 9
——— The Horror, the Horror (a) . . . . . Aug 8
——— Hugo (a) . . . . . Oct/Nov 16
Kessel, John—
Stories for Men (na) . . . . . Oct/Nov 170
Kiernan, Rebecca Lu—
I'll Be Ready for Marriage . . . (p) . . Jul 59
To the Bat with the Broken Wing (p) . . . . . Sep 141
Kress, Nancy—
Patent Infringement (ss) . . . . . May 48

Landis, Geoffrey A.—
At Dorado (ss) . . . . . Oct/Nov 64
A Glimpse of Splendor (p) . . . . . Aug 87
The Long Chase (ss) . . . . . Feb 40
Turing Test (ss) . . . . . Sep 96
Le Guin, Ursula K.—
The Wild Girls (nt) . . . . . Mar 8

MacLeod, Ian R.—
Breathmoss (na) . . . . . May 82
Marley, Louise—
Jamie Says (ss) . . . . . Aug 52
McAuley, Paul—
The Assassination of Faustino Malarte (nt) . . . . . Jul 10
The Passenger (nt) . . . . . Mar 44
McDonald, Ian—
The Hidden Place (nt) . . . . . Oct/Nov 114
Miller, Amy—
When the Aliens Ask of Art (p) . . . . Feb 39
Milosevic, Mario—
Ark (p) . . . . . Jul 41
Elementary (p) . . . . . Jun 97
The Great Divide (p) . . . . . Apr 83
Looking Back (p) . . . . . May 131
Undertaker (p) . . . . . Jul 101
Why Go? (p) . . . . . Jun 135
Wondering What They Are up to in the Middle of the Night (p) . . . . . May 55

Neube, R.—
Life in the Sardine Lane (ss) . . . . . Mar 68
Niven, Larry (with Brenda Cooper)—
Free Floaters (nt) . . . . . Aug 58
Nordley, G. David—
War, Ice, Egg, Universe (nt) . . . . . Oct/Nov 76

Purdom, Tom—
A Champion of Democracy (nt) . . . May 26

Reed, Robert—
Lying to Dogs (nt) . . . . . Dec 48
Oracles (nt) . . . . . Jan 10
She Sees My Monsters Now (ss) . . Jun 98
Veritas (na) . . . . . Jul 102

Sanders, William—
Duce (ss) . . . . . Aug 40
Silverberg, Robert—
The Longest Way Home: Conclusion (se) . . . . . Jan 82
The Second Wave (nt) . . . . . Aug 14
With Caesar in the Underworld (na) . . . . . Oct/Nov 20
Absolutely Bogus (ed) . . . . . Apr 4
Burning Science at the Stake (ed) . . . . . Sep 4
The Cordwainer (ed) . . . . . Mar 4
The Final Voyage of Odysseus (ed) . . . . . Feb 4
How to Write (ed) . . . . . Jul 4
Let's Hear It for Pluto (ed) . . . . . May 4
Problems of Time Travel (ed) . . . . . Jun 4
Prodigies (ed) . . . . . Dec 4
The Quality of Pity Is Not Folded (ed) . . . . . Oct/Nov 12
The Skald of Science Fiction (ed) . . Jan 4
The Squid's Elbows (ed) . . . . . Aug 4
Spinrad, Norman—
On Books: Movements (r) . . . . . Oct/Nov 226
———The Right (and Wrong) Stuff (r) . . . . . Mar 130
Stableford, Brian—
Hot Blood (ss) . . . . . Sep 48
Taking the Piss (nt) . . . . . Jun 42
Steele, Allen M.—
Across the Eastern Divide (na) . . . . Feb 86
Glorious Destiny (na) . . . . . Dec 92
Lonesome and a Long Way From Home (nt) . . . . . Jun 76
Strauss, Erwin S. —
Conventional Calendar (a) . . . . . Jan 142
——— . . . . . Feb 142
——— . . . . . Mar 142
——— . . . . . Apr 142
——— . . . . . May 142
——— . . . . . Jun 141
——— . . . . . Jul 141
——— . . . . . Aug 141

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

——— ..... Sep 144
——— ..... Oct/Nov 237
——— ..... Dec 144
Stross, Charles—
Halo (nt) ..... Jun 108
Router (na) ..... Sep 98
Tourist (nt) ..... Feb 14
Swanwick, Michael—
A Great Day for
Brontosaurs (ss) ..... May 78
The Little Cat Laughed
to See Such Sport (ss) ..... Oct/Nov 100

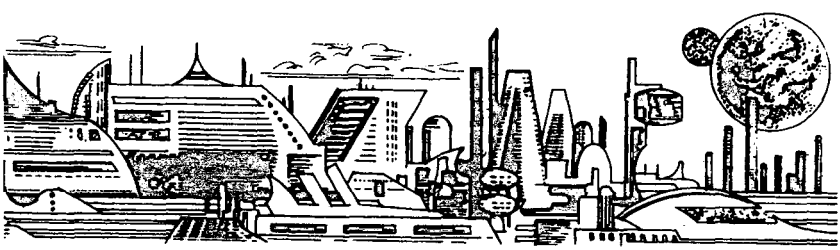
Tan, Cecilia—
Touch Pain (nt) ..... Feb 52
Traviss, Karen—
A Slice at a Time (ss) ..... Jul 52
Turzillo, Mary A.—
Corn Snake (p) ..... Feb 51
Crustaceans (p) ..... Mar 43

Utley, Steven—
Walking in Circles (ss) ..... Jan 62
Song and Dance (p) ..... Apr 61
Treading the Maze (ss) ..... Feb 80

Van Pelt, James—
The Last of the O-Forms (ss) ..... Sep 82
The Safety of the Herd (ss) ..... Jan 48

Wadholm, Richard—
At the Money (nt) ..... Apr 16
Watkins, William John—
The Werewife's Whelps
Leave Home (p) ..... Mar 67
The Werewife Wonders
About Genetics (p) ..... Mar 33
The Werewolf Ages (p) ..... Apr 43
Watson, Ian—
A Speaker for the
Wooden Sea (na) ..... Mar 92
White, Lori Ann—
Target Audience (ss) ..... Jul 92
Winter, Laurel
Expedition (p) ..... Jan 61
Heisenberg's Ghost (p) ..... Jul 51
Williams, Liz—
The Banquet of the Lords
of Night (ss) ..... Jun 34
Quantum Anthropology (ss) ..... Feb 68
Williams, Sheila—
The 2002 Isaac Asimov
Award (a) ..... Jul 8

Zahn, Bob—
Not only am I a prince (c) ..... Feb 8



LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

SEVENTEENTH ANNUAL READERS' AWARD

It hardly seems possible that we could be up to the January issue already, but that's what the calendar says—and that means that once again it's time for our Readers' Award poll, which is now in its (can this possibly be true? Seems like only yesterday that we started it!) seventeenth year.

Please vote. Your ballot will be automatically entered in our drawing for a free one-year subscription. Most of you know the drill by now. For those of you who are new to this, we should explain a few things.

We consider this to be our yearly chance to hear from *you*, the readers of the magazine. That's the whole point behind this particular award. What were *your* favorite stories from *Asimov's Science Fiction* last year? This is your chance to let us know what novella, novelette, short story, poem, cover artist, and interior artist you liked best in the year 2002. Just take a moment to look over the Index of the stories published in last year's issues of *Asimov's* (pp.137-139) to refresh your memory, and then list below, in the order of your preference, your three favorites in each category. (In the case of the two art awards, please list the *artists* themselves in order of preference, rather than the individual covers or interior illustrations—with the poetry award, however, please remember that you are voting for an individual *poem*, rather than for the collective work of a particular poet that may have appeared in the magazine throughout the year.)

Some cautions: Only material from 2002-dated issues of *Asimov's* is eligible (no other years, no other magazines, even our sister magazine *Analog*). **Each reader gets *one* vote, and *only* one vote.** If you use a photocopy of the ballot, please be sure to include your name and address; your ballot won't be counted otherwise.

Works must also be categorized on the ballot as they appear in the **Index.** No matter what category *you* think a particular story ought to appear in, we consider the Index to be the ultimate authority in this regard, so be sure to check your ballots against the Index if there is any question about which category is the appropriate one for any particular story. In the past, voters have been careless about this, and have listed stories under the wrong categories, and, as a result, ended up wasting their votes. All ballots must be postmarked no later than **February 1, 2003,** and should be addressed to: **Readers' Award, *Asimov's Science Fiction*, Dell Magazines, 475 Park Avenue South, 11th Flr., New York, NY. 10016.** You can also vote via the Internet at **asimovs@dellmagazines.com**, but you must give us your whole U.S. mailing address. We will also post online ballots at our website, so please check us out at **www.asimovs.com.**

Remember, *you*—the readers—will be the only judges for this award. No juries, no panels of experts. *You* are in charge here, and what *you* say goes. In the past, some categories have been hotly contended, with victory or defeat riding on only one or two votes, so *every* vote counts. Don't let it be *your* vote for *your* favorite stories that goes uncounted! Some years, that one vote might have made all the difference. So don't put it off—vote today!

The winners will be announced in an upcoming issue.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

BEST NOVELLA:

1. _____
2. _____
3. _____

BEST NOVELETTE:

1. _____
2. _____
3 _____

BEST SHORT STORY:

1. _____
2. _____
3. _____

BEST POEM:

1. _____
2 _____
3 _____

BEST COVER ARTIST:

1. _____
2. _____
3. _____

BEST INTERIOR ARTIST:

1 _____
2. _____
3. _____

NAME: _____

ADDRESS: _____

SIGNATURE: _____

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

SF CONVENTIONAL CALENDAR

The WorldCon goes back to Scotland in 2005—to meeting rooms with ceilings! Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For an explanation of con(vention)s, a sample of SF folksongs, info on fanzines and clubs, and how to get a later, longer list of cons, send me an SASE (self-addressed, stamped #10 [business] envelope) at 10 Hill #22-L, Newark NJ 07102. The hot line is (973) 242-5999. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con 6 months out. Look for me at cons behind the Filthy Pierre badge, playing a musical keyboard. —Erwin S. Strauss

NOVEMBER 2002

22–24—**OryCon.** For info, write: **Box 5703, Portland OR 97228.** Or phone: **(503) 722-9900** (10 AM to 10 PM, not collect). (Web) **www.orycon.org.** (E-mail) **all.wilsonsage@attbi.com.** Con will be held in: Portland OR (if city omitted, same as in address) at the Doubletree Columbia River. Guests will include: S. R. Matthews, Lee Seed, Martin Greenberg.

22–24—**Midwest FurFest. www.furfest.org. (847) 605-1234 (hotel).** Hyatt, Schaumburg (Chicago) IL. Furry fandom.

23–24—**Dimensions-on-Tyne. www.dimensionsontyne.com.** Holiday Inn, Newcastle-on-Tyne UK. John Nathan-Turner.

29–Dec.1—**LosCon. (818) 760-9234. www.loscon.org.** Airport Hilton, Burbank CA. David M. Weber, Nene Thomas.

29–Dec.1—**ChambanaCon. www.chambanacon.org.** Hilton, Springfield IL. Gene Roddenberry Jr., Glen Cook—and me!

29–Dec.1—**Chicago Tardis. www.chicagotardis.com.** Sheraton Northwest, Arlington Heights (Chicago) IL. Dr. Who.

30–Dec.1—**Trek Celebration. (913) 441-9405. www.sfedora.com.** Marriott, Indianapolis IN. Commercial Trek event.

DECEMBER 2002

6–8—**SMOFCon, 3118 Via Valesco, Escondido CA 92029. www.fopaws.com.** San Diego CA. Con organizers talk shop.

13–15—**PhilCon, Box 8303, Philadelphia PA 19101. www.philcon.org.** Marriott. C. Willis, Gerrold, S. & J. Robinson.

13–15—**TakoCon, 434 Boggs Ave., Pittsburgh PA 15211. www.takocon.com.** Marriott City Center. Anime.

JANUARY 2003

4–5—**Trek Celebration, 4623 Aminda, Shawnee KS 66226. (913) 441-9405.** Sheraton Meadowlands, near New York.

10–12—**RustyCon, Box 84291, Seattle WA 98124. www.rustycon.org.** Doubletree, Bellevue WA. D. Duncan, L. Bagby.

10–12—**GAFilk, 890-F Atlanta #150, Roswell GA 30075. www.gafilk.org.** Atlanta GA area. SF/fantasy folksinging.

17–19—**Arisia, Bldg. 600, 1 Kendall Sq. #322, Cambridge MA 02139. www.arisia.org.** Boston MA. Turtledove, Lewis.

17–19—**ChattaCon, Box 23908, Chattanooga TN 37422. www.chattacon.org.** Read House. Greg Benford, C. L. Grant.

23–27—**FURther ConFusion, 105 Serra Way #236, Milpitas CA 95035.** San Jose CA. Furries; no connection to below.

24–26—**ConFusion, Box 8284, Ann Arbor MI 48107. www.stilyagi.org.** Detroit MI. General SF/fantasy convention.

24–26—**VeriCon, H-R SF Assn., c/o 4 Univ. Hall, Harvard U., Cambridge MA 02138. www.vericon.org.** Friesner.

24–26—**MarsCon, c/o Box 8143, Yorktown VA 23693. www.marscon.net.** Clarion, Williamsburg VA. Relaxacon.

31–Feb. 3—**UshiCon, Box 40937, Austin TX 78704. www.ushicon.com.** Capital Marriott, Austin TX. Anime.

FEBRUARY 2003

7–9—**CapriCon, Box 60085, Chicago IL 60660. www.capricon.org.** Sheraton, Arlington Heights (Chicago) IL.

14–16—**Boskone, Box 809, Framingham MA 01701. (617) 625-2311. www.nesfa.org.** Sheraton, Boston MA. D. Brin.

AUGUST 2003

28–Sep. 1—**TorCon 3, Box 3, Stn. A, Toronto ON M5W 1A2. www.torcon3.on.ca.** WorldCon. C$250/US$170.

SEPTEMBER 2004

2–6—**Noreascon 4, Box 1010, Framingham MA 01701. www.noreascon.org.** Boston MA. William Tenn. WorldCon. $140.

AUGUST 2005

4–8—**Interaction, Box 58009, Louisville KY 40268. www.interaction.worldcon.org.uk.** Glasgow UK. WorldCon. $115.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

CLASSIFIED MARKETPLACE

Asimov's January '03

Advertise in the world's leading science fiction magazines with our Asimov's/Analog combined classified section. Ad rates per issue: $2.95 per word (10 word minimum), $125 per column inch (2.25 inch maximum). SPECIAL INTRODUCTORY OFFER: Buy two ads and receive a third ad FREE. Send orders to: Dell Magazines, Classified Department, 475 Park Ave. S., 11th Floor, New York, NY 10016. Direct inquires to: (212) 686-7188; Fax (212) 686-7414 or email: classifiedads@dellmagazines.com

AUDIO/VIDEO

Audiobooks, Niven, LeGuin, Willis, Baxter, Egan, Sterling, Reed, Etc. www.audiotexttapes.com

BARGAIN DVD's at savings of 60% and more, in a variety of genres! www.BulldogBargains.com

BOOKS/PUBLICATIONS

A NEW VOICE IN DARK FANTASY! Brandon Berntson's first novel, My Little White Geraniums is on sale now at PublishAmerica.com. Get yours today for $24.95!

ANTARES VICTORY by Michael McCollum. The long awaited conclusion to the Antares Trilogy (Antares Dawn, Antares Passage) is now online at Sci Fi - Arizona, http:www.scifi-az.com. First Time in Print Anywhere!

BEYOND THE TIME MACHINE, by Burt Libe, sequel to THE TIME MACHINE. Novel, 348pp, 5.5" x 8.5". For further info, visit: http://us.geocities.com/bttm_book/ Or, please send $19.95 + $3.50s/h (check or m/o) to: TimeTravellerTwo, P.O. Box 1196, Los Altos, Ca. 94022 (U.S. orders only) (Dealers: query first)

Books, Sci-Fi & More. Low Prices. Visit www.jyeagerbooks.com

BUYING SCIENCE FICTION magazines, book collections. Will travel for large accumulations. Bowman, Box 167, Carmel, IN 46082.

CHRISTIAN SCIENCE FICTION print magazine and webzine. http://www.gateway-sf-magazine.com

CREATIVE SOLUTIONS INCLUDE REVOLUTION

Nova Albion: Science Fiction & Fact zine
Free catalog of all products Samples available
P A C, PO Box 2523, San Anselmo, CA 94979
www.pacificareacomm.com 415-259-0118

McGee & Woods, Inc. solicits manuscripts of unpublished SF&F novels. Submit to PO Box 24727, Nashville, TN 37202-4727.

PUBLISH YOUR BOOK ONLINE, Third Millennium Publishing, a cooperative of online writers and resources, http://3mpub.com

BOOKS/PUBLICATIONS

www.rereadables.com. Online Used Book Store. Science Fiction, mystery and more.

Startling new book from new author, J S Lyles: The Resurrection Rock Trilogy. Go to: http://3mpub.com/lyles/.

COLLECTOR'S ITEMS

ORIGINAL ART for SF/F/H books, magazines, gaming +. Color catalog $15.00 (overseas $20.) Vintage illustrations always wanted. Worlds of Wonder, POB 814-Dell, McLean, VA 22101. www.wow-art.com

INSTRUCTION

SCIENCE FICTION WRITING CLASSES. Published SF authors teach Science Fiction Writing online at www.WritingClasses.com. Selected "Best of the Web" by *Forbes*. For FREE catalog call 877 974-8377.

MISCELLANEOUS

PLASTIC MODELS: Space, Sci-Fi, TV, movies, etc. Free Catalog, also buying/trading. Green's Dept. DL, Box 55787, Riverside, CA 92517. (909) 684-5300; (800) 807-4759; FAX (909) 684-8819; dl@greenmodels.com; http://www.greenmodels.com

PTCIL - Plan and invest your way to Space. www.poweroftenclubintlltd.org

PSYCHICS

SPIRITUAL PSYCHIC
HELPS RESTORE BROKEN LOVE
HEALTH • HAPPINESS • PEACE • REMARKABLE RESULTS.
CALL FOR PHONE READINGS
VISA/MC **(707) 579-5123** AMEX

UNUSUAL ITEMS

Alien Nature or Human Nature: Understand it all. The Truth? Can you handle the Truth? Find out at www.all2true.org and www.all2true.com. Also, you may find interesting things like back issues of *Analog, Asimov's* and *Aboriginal Science Fiction.*

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

NEXT ISSUE

FEBRUARY ISSUE

Hot new writer **Jim Grimsley** returns next issue with our lead story for February, taking us thousands of years into a bizarre high-tech posthuman future, in company with an earnest young novice on a demanding, dauntingly complex, and ultimately dangerous quest for the "Perfect Pilgrim"—a quest with some unexpected and far-reaching consequences, that will call for some very hard choices indeed . . . This one is compelling, evocative, lyrical, and luminously strange, so don't miss it!

OTHER TOP-FLIGHT WRITERS

Eliot Fintushel returns with a story of the sort—need we even say it?—that only he could *think* of, let alone write, an odd, poignant, and powerful story that gives us a ringside seat for one of the most deadly and cosmic family feuds ever imagined, one visible through "The Grass and the Trees"; prolific British "hard-science" writer **Stephen Baxter** takes us deep into interstellar space for a visit to an awesome "Breeding Ground"; new writer **Karen Traviss** shows us the sort of preparation someone needs to go through in order to make them "Suitable for the Orient"; **Paul McAuley** preaches a sly and elegant lesson about "The Madness of Crowds"; **Simon Ings** invites us along as he goes in hot pursuit of an "Elephant" of a most peculiar sort; and new writer **Michael Bateman**, making an exciting *Asimov's* debut, tells us to all go take a flying jump—out of orbit into Jupiter, in this case!

EXCITING FEATURES

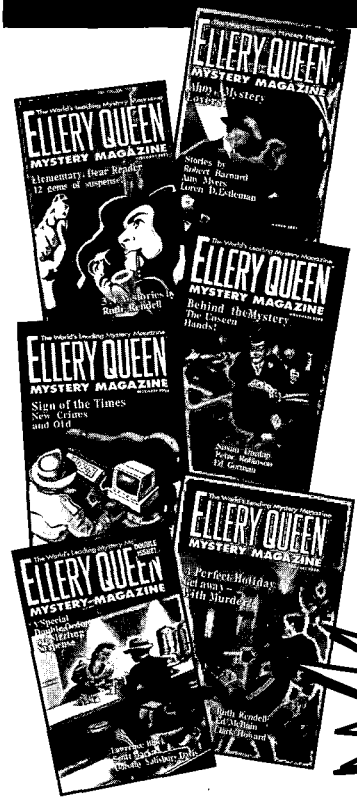
Robert Silverberg's "Reflections" column takes a look at "Olla Podrida"; and **Paul Di Filippo** brings us "On Books"; plus an array of cartoons, poems, and other features. Look for our February issue on sale at your newsstand on December 17, 2002, or subscribe today (you can also now subscribe electronically, online, or order downloadable electronic formats, at our *Asimov's* website, *www.asimovs.com*) and be sure to miss none of the great stuff we have coming up for you this year!

COMING SOON

great new stories by **Lucius Shepard, Kage Baker, Robert Silverberg, Charles Stross, Kristine Kathryn Rusch, William Sanders, John Kessel, Allen M. Steele, Mike Resnick,** and many others.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

6 Issues, Just $9.97!



Subscribe today to *Ellery Queen's Mystery Magazine* and you'll get every intriguing issue delivered directly to your door.

Ellery Queen's Mystery Magazine leads the genre in critical acclaim with more than 50 major awards and nominations just since 1990! With suspenseful stories from the honor roll of mystery and crime fiction's great writers PLUS mystery limericks, poems and cartoons, book reviews, and an occasional mystery crossword!

SAVE 40%!

To order by charge card, call toll-free:

1-800-333-3311

Outside the U.S.A.: 1-850-682-7644

BY MAIL

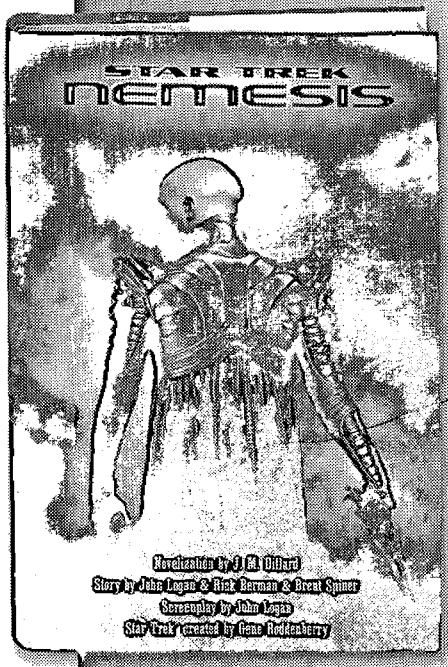
Ellery Queen, P.O. Box 54052,
Boulder CO, 80322-4052

Please allow 4 to 6 weeks for delivery of your first issue. Outside U.S.A.: Add $4 per year for shipping and handling. All orders must be paid in U.S. funds. *We publish a double issue once a year which counts as two issues toward your subscription. 5E10

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED

Join the adventures

in the Final Frontier—and beyond—with these all-new *Star Trek*® novels!


STAR TREK
NEMESIS
Novelization by J.M. Dillard
Story by John Logan & Rick Berman & Brent Spiner
Screenplay by John Logan
Star Trek created by Gene Roddenberry

A generation's final journey begins...don't miss the thrilling novelization of the exciting new film, *Star Trek Nemesis*—including exciting scenes not featured on the big-screen!

Desperately searching for his father, Captain Benjamin Sisko, young Jake finds himself hurled across the galaxy where his quest takes a turn beyond his wildest imagining.

Also look for **Star Trek: Deep Space Nine**®—**The Lives of Dax** in paperback.

ALSO AVAILABLE FROM SIMON & SCHUSTER AUDIO

Also available as eBooks

STAR TREK BOOKS
Published by Pocket Books
A VIACOM COMPANY

www.simonsays.com/st www.startrek.com

™, ®, & © 2002, 2003 Paramount Pictures. All Rights Reserved.
STAR TREK and related marks are trademarks of Paramount Pictures. Pocket Books Authorized User.

LICENSED TO UNZ.ORG
ELECTRONIC REPRODUCTION PROHIBITED